# The Croonian Lectures:

## A CONTRIBUTION TO THE STUDY OF THE BLOOD AND THE CIRCULATION.

*Delivered before the Royal College of Physicians of London,*

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### LECTURE I.[1]

*Delivered on June 2nd, 1896.*

MR. PRESIDENT AND GENTLEMEN,—My first duty is to offer you my sincere thanks for the honour you have done me in asking me to deliver the Croonian Lectures for the present year. The fulfilment of your request has proved not merely a grateful exercise in itself, but a useful incentive to the execution of it. I am, however, painfully sensible of the incompleteness of the results which I propose to submit to your consideration, of the many gaps that remain to be filled in, and of the shortcomings that may be amended by further observation. During the past few years my leisure has been devoted to the physiological study of the circulation and the blood, and during the clinical portion of the year the results attained have been applied to practical ends, so that it has happily fallen to my lot to study side by side, as it were, the physiological and the pathological — the two aspects of one united whole. The subjects chosen may not appear to be closely allied in a physiological or clinical sense. Nevertheless it will be found that the thread of the inquiry has in some degree strung them together. They will be dealt with in the twofold aspects of experimental and applied physiology. The methods of observation and the experimental data will, therefore, precede the application of the physiological positions which they support to "the prevention, control, and cure of diseases"—the practical aim of this course of lectures. According to the injunction imposed by this College on the Croonian lecturer, it would seem that he is expected to hold the balance true between the science and the practice of medicine, and to do his best to further and substantiate the latter by his inquiries into the foundations of the former. The remark is now almost trite and commonplace, but it will bear repetition, that medicine is but a department of physiology. It is practical physiology, or as the Lumleian lecturer of 1892 (Dr. Pye-Smith) tersely and forcibly put it, "pathology is only a chapter of physiology which for convenience we have separated from the rest." Further, practical pathology rises to its highest ideal when it becomes as physiological as are its principles. Research is year by year drifting us upwards to this higher level; and it may now be truly said that the most prominent feature of the practical medicine of to-day is the physiological. In the course of these lectures a few aspects of strictly physiological medicine will come under consideration, such as those relating to exercise, rest, baths, massage, the movement cures, and the animal extracts, in so far as these various agencies affect the circulation and the blood. Some of the physiological modes of treatment to be referred to—such as massage and resistive movements—are distrusted by many, perhaps because they may seem to be somewhat too pretentious and are apt to prove fruitful ground on which charlatanism may flourish. It is to be hoped, however, that further inquiry may shed some light on the physiology of these methods and afford some presumptive evidence of the practical utility of them, so that what in them promises to be useful may not be cast aside through insufficient examination.

This and the following lecture will be devoted to the results of observation on the circulation, and the third and fourth lectures to those referring to the blood.

#### THE CIRCULATION.

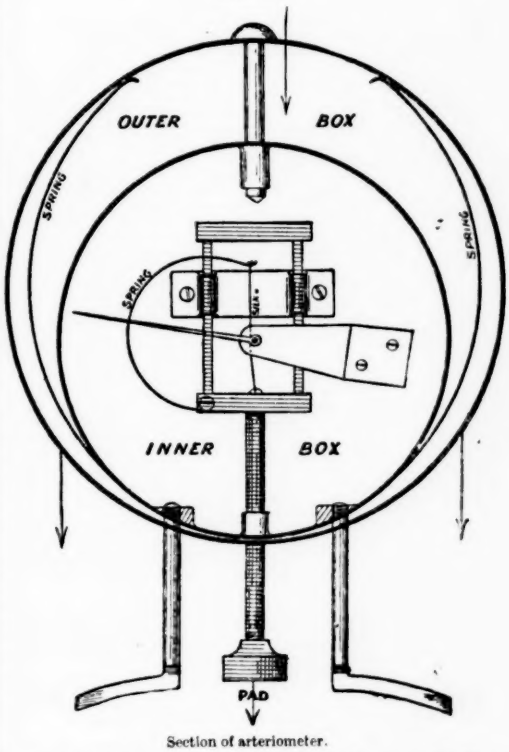
My observations on the circulation in man have been mainly directed to the determination of the calibre of the radial artery and blood pressure with the view of ascertaining the causes—physiological and pathological—which produce variation or which may prevent variation in these important aspects of the pulse. Inasmuch as the diagram of the pulse furnished by the sphygmograph practically leaves these aspects unrecorded or at any rate sheds but an indefinite light upon them, it seemed to me that an inquiry having as its object the direct measurement of them might yield some useful results.

#### APPARATUS EMPLOYED.

The observations on the pulse were made by means of two instruments — one the arteriometer, so called because it measures the calibre of the artery, and the other the pulse-pressure gauge. The former instrument, however, not merely directly records the calibre, but indirectly indicates the blood pressure; for the calibre is, as a rule, determined by the pressure in the normal condition of the circulation. Hence the arteriometer has been largely relied on in these observations, especially, too, as the varying resistance of the tissues over the artery does not affect the readings obtained by it. The two facts—calibre and pressure—are, however, not always in accord in the pathological field, and for the purpose of discriminating between them the pressure gauge has been found useful. Having recently described these instruments[2] and the mode of using them, it will, perhaps, be unnecessary on this occasion to do more than afford a brief description of the arteriometer. A hydrostatic method of measuring the volume of the limb has also been adopted. In the experiments on animals made in conjunction with Professor Schäfer in the Physiological Laboratory of University College the usual appliances of a well-appointed laboratory were employed.

1. *The arteriometer.*[3]—The mechanism is enclosed in a small circular box (inner box, Fig. 1) which presents below

FIG. 1.




Section of arteriometer.

three stems—one on each side, fixed to the box, carrying the foot-rests, and one between, to which the pad or button is screwed, is free to settle over the site of the artery. This central stem is fixed to a frame, which slides in grooves to maintain the exact vertical direction of the up and down

[1] Lecture II. was delivered on June 4th and Lectures III. and IV. will be delivered on June 9th and 11th.

[2] Pulse Gauging, 1895.

[3] This instrument was described by me at the meeting of the Physiological Society held at King's College in March, 1894.

movement. This movement is communicated to the hand on the dial by a silk thread attached to the lower part of the frame and maintained in a state of uniform tension around the axle by a piece of hair-spring, so that the exact position of the pad in relation to that of the foot-rests is indicated by the hand on the dial. If, now, the two foot-rests are planted by the sides of a piece of rubber tube the pad will settle on it, and the hand on the dial will indicate the position which it has assumed as the starting-point of the measurement to be made, and all that is necessary in order to determine the internal diameter of the tube is some arrangement that will push forward the pad until it closes the tube, when the hand on the dial will travel from its initial position and furnish the required measure. That arrangement is secured by a rod attached to the outer case enclosing the instrument which merely thrusts before it the frame carrying the pad when that case is pushed downwards. As the outer box is pressed forwards you observe that a point is reached when air can no longer be blown through the tube, and in the meanwhile the diameter is recorded on the dial. The outer box serves a most important purpose in making such a delicate measurement as that of the radial calibre. It is separated from the instrument by the intervention of springs which glide towards the rod as it is pressed downwards; so that a uniform pressure is thus maintained on the foot-rests throughout every observation, and the observer cannot unconsciously or in any way modify the reading obtained. The personal equation is thus much more satisfactorily met than it could be even by more elaborate mechanical arrangements. The dial provides for the measurement of four millimetres and is graduated in tenths of a millimetre, and it automatically revolves with the indicator, so that every reading is made from zero and not from a variable part of the scale, as would be the case were the dial to remain fixed. Lastly, it will be obvious that the force used to close the artery always exceeds that of the blood pressure, otherwise the indicator would not travel on the dial.

2. *Volumetric measurement of a limb.*—With the view of determining the difference which may be produced in the volume of a limb by local exercise, by faradaism, by massage, by resistive movements, and by baths, a mode of measurement afforded by the displacement of water has been preferred to that furnished by the plethysmograph or the tape. The following is the method which has been found the most satisfactory. The observations have as a rule been made on the arm. A large trial jar is placed in an overflow basin. After it has been very carefully adjusted to an absolutely horizontal position by a spirit-level it is filled exactly to the brim with tepid water (95° F.), this point being indicated by the correct reflection of a window on the surface. The arm, around which an aniline line has been drawn above the elbow, is immersed until the line is touched all round by the surface of the water. The overflow is then measured before and after the experiment.

### THE RESULTS OF OBSERVATION.

Before affording some of the results of observation one or two remarks should be made in regard to the tactile estimation of the lumen of the radial artery which have been suggested by the use of the arteriometer. This instrument has repeatedly yielded me useful service in correcting illusory impressions furnished by the finger in regard to the calibre of the artery under different physiological and pathological conditions. No results have been accepted unless confirmed by two or three separate applications of the instrument, and the corrections it has furnished have often been very considerable. In like manner the tactile estimations of others in regard to the lumen have been tested by it with similar results. The outcome of these observations, therefore, suggests that it is not always such an easy matter as is usually supposed to accurately distinguish between the beat of the pulse and the calibre of the artery. Perhaps this defective discrimination is apt to arise mainly from the ictus so monopolising the tactile appreciation that the observer's estimate of the calibre is liable to be biased by it, and from the difficulty of duly appreciating more than one sensation through the sense of touch at the same time. Observation has shown that the well-trained finger is not so apt to go astray in gauging the lumen when high tension exists as in estimating it when the minimum pressure is much reduced; for then it would seem as if the increased difference between the minimum and maximum pressures is apt to afford an exaggerated impression of the calibre. Examples illustrating this point will be found when reference is made to the effects of exercise, massage, resistive movements, vaso-dilators, and hot baths on the radial pulse.

### I. *Physiological Variations of the Radial Pressure and Calibre.*

1. *Posture.*—A change of posture (e.g., from the sitting to the recumbent posture or the reverse) in health is almost invariably accompanied by an immediate and decided alteration in the radial blood pressure and calibre. They both fall as the recumbent posture is assumed; taking the average of observations the variation in the pressure is from 20 to 40 mm. of Hg., and that of the calibre from 0·4 to 0·6 mm. As a rule, when the health is good, and presumably when the vasomotor tone is satisfactory, these postural variations are so well adjusted to the changes of posture that they take place together, without any detectable interval between them and without any oscillatory disturbance intervening; but even in apparent health slight transitional variations, lasting but a few seconds and immediately following the change of posture, are not uncommonly met with before the normal level for the posture assumed is attained. Such transitory intervening variations are probably accounted for by the hydrostatic moment not being compensated for by the dynamic moment, but in a few seconds the compensation is duly adjusted. Moreover, the same fact was repeatedly observed by Mr. Leonard Hill when experimenting on the effects of change of posture on the blood pressure in animals.[4] It probably is the nucleus of that much larger and more prolonged oscillation of the blood pressure produced by change of posture in the subjects of reduced vasomotor tone which will be referred to later. It has been observed that as life advances beyond the middle period the range of postural variation in the radial pressure and calibration become, as a rule, gradually lessened, and may even be abolished. The period when restricted variation may set in is, however, a pretty wide one, and may be said to extend from the fifty-fifth to the seventy-fifth or even eightieth year. How are these normal postural variations produced? It is conceivable that gravity might play an important *rôle* in the distribution of the blood in the different postures in health were there no vasomotor system of nerves or were the function of these nerves in abeyance. But then the effect of gravity on the circulation when the posture is changed would be found to be exactly the reverse of that which obtains in a state of health; for in the erect postures the blood would collect in the capacious venous system within the abdomen and gravitate into the legs, and the vessels in the upper parts of the body would be proportionately reduced, and when the recumbent posture was assumed the blood would become more evenly distributed—the effect of gravity being then neutralised. Under such conditions the radial artery would enlarge in the recumbent and diminish in the erect posture, a result which actually does obtain when the effect of gravity is allowed to manifest itself from failure in the compensating mechanism. Therefore, in normal man the hydrostatic influence of gravity in the erect postures must be counterbalanced, and this compensation is attained by the vasomotor mechanism, and especially by the splanchnic portion of it, a fact which has been so well established by Mr. Leonard Hill.[5] This observer found that in the monkey the compensation is more developed than in rabbits, cats, or dogs, and that it is still more developed in man. In fact, in man it would seem that the adjustment of the vasomotor mechanism to gravity actually amounts to over-compensation, so that when, for example, the erect postures are assumed the vaso-constriction that immediately takes place in the terminal vessels in the splanchnic area and elsewhere is such as to raise the blood pressure throughout the whole arterial system, and when the recumbent posture is resumed that constriction passes away and the arterial fulness subsides. The predominant cause, therefore, of the normal differences observed in the blood pressure and calibre produced by change of posture is vasomotor. Notwithstanding this fact, however, there is evidence to show that gravity does still influence the blood pressure and calibration of the arteries; but the effect of this interference is comparatively insignificant. For example, the subject being recumbent a radial calibre of 1·6 mm. at the level of the arch of the aorta may become 1·7 mm. ten inches below and 1·4 mm. ten inches

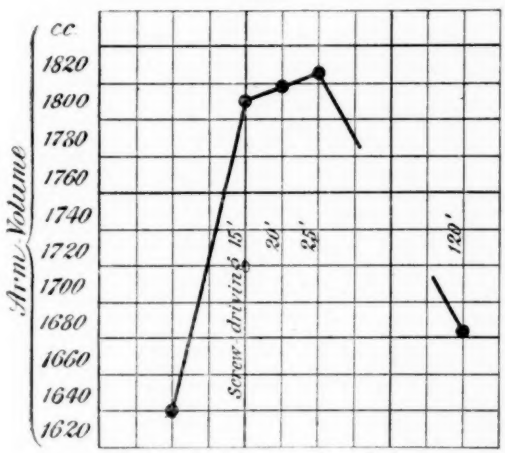
[4] The Influence of the Force of Gravity on the Circulation of the Blood, by Leonard Hill, M.B.: Journal of Physiology, 1895.
[5] Op. cit.

above that level. But even this slight influence of gravity is eliminated from the postural measurements by placing the wrist always at the same distance—e.g., four inches—below the level of the aortic arch. When the subject assumes the recumbent posture gravity may be made available for supplying a large amount of additional blood derived from the limbs for circulation in the rest of the body—a fact which may be observed when on putting both legs up and supporting them a radial calibre in the recumbent posture may advance in two minutes from 1·7 mm. to 2·2 mm. Such a position of the limbs may prove useful in certain emergencies, as in syncope.

*The agreement between the postural variations observed in normal man and those determined in animals.*—Before leaving this part of the subject it should be remarked that the leading results which have been observed in man in regard to the postural variations of the radial pulse have been confirmed by the experiments of Mr. Leonard Hill on monkeys, the two coinciding series of conclusions having been arrived at independently and by totally different methods.[6] For example: (1) the temporary hydrostatic effects frequently observed in man as the immediate result of changing the posture were recorded in the tracings of the blood pressure of the monkey when the animal was turned from the feet down to the horizontal position or *vice versâ*; (2) the postural variations of the blood pressure furnished by healthy subjects were afforded by normal monkeys; and (3) the reversal of these variations found in man when the vasomotor tone is reduced by any cause was observed in the monkey when weakened by long anæsthesia or by operative procedures.

2. *Exercise.*—It has been found that general exercise and exercise confined to the forearm or arm at first raises and then after a variable interval diminishes the radial blood pressure and calibre when taken in the sitting posture; and it has been further observed that when this reduction was apparent as the result of general exercise the pressure and the calibre rose when the subject assumed the recumbent posture. Local exercise increases the volume of a limb to a marked degree. In a subject aged twenty-two it was observed (Fig. 2) that screw-driving for fifteen minutes

FIG. 2.




Arm volume after local exercise (screw-driving).

raised the volumetric measurement of the arm from 1632 c.c. to 1800 c.c., and for ten minutes more to 1818 c.c., and that after the expiration of two hours after the cessation of the exercise the volume of the arm still exceeded the initial measure by 88 c.c. How are these effects to be explained? In the first stage of exercise the enlargement of the artery and the increase of the blood pressure are obviously the result of excitation of the heart's action—of the increased discharge of blood into the arteries—and of the active determination of blood towards the muscles; and perhaps also this result is increased by muscular pressure on the peripheral vessels (arterioles and veins). But how is the reduction brought about? It has been repeatedly observed that the diminution of the radial calibre is not in the first instance the result of exhaustion or fatigue, though it undoubtedly becomes still more pronounced when the fatigue-stage of exercise sets in and that it is primarily and intimately associated with muscular effort and therefore is much longer in supervening when exercise is taken on the level than when climbing is attempted, for then it is a comparatively early event. There are probably two prominent causes which induce the reduction of an artery like the radial. In the first place the muscles for example of the arm during exercise, especially local exercise, receive an enormously increased supply of blood which is delivered to them through many branches given off between the axillary artery and the portion of the radial under observation; the blood pressure and the calibre at this point must, therefore, necessarily fall in proportion as the supply of blood to the muscles is increased, the pressure in the arterial tubing of the limb being thus short-circuited as it were throughout. Then, again, in general exercise the most actively employed muscles, such as those of the legs, will probably receive a larger proportionate share of blood; and, furthermore, at a certain stage of the exercise this deviation of the blood downwards will be increased by loss of vasomotor tone permitting gravity to determine some accumulation of blood in the lower parts. Probably all these causes contribute to the radial reduction which occurs in the active postures at a certain stage of general exercise, as in walking, and especially in climbing; but in all probability the predominant cause is the active derivation of blood into the capacious periphery of the circulation located in the muscles. This position is supported by the fact that an artery like the temporal, which is not supplied to muscles actively employed in exercise, remains persistently distended throughout a long-continued muscular effort, such as that of climbing for many hours[7]; and by the observation that the radial artery of one arm slung at rest during moderate exercise is not reduced, while that of the free arm is reduced.[8] Diminution of vasomotor tone in the second stage of exercise is probably the cause of the rise of the radial pressure and calibre observed in the passive posture (recumbency) when gravitation ceases to influence the circulation. Why should the volume of the exercised limb increase? The rapid accession of blood is obviously the cause of the immediate enlargement; but though this may be accounted for by the turgescence of the vessels which accompanies muscular contraction, I think it is somewhat doubtful if the persistence of the swelling for several hours after the cessation of all muscular action can be thus satisfactorily explained, for surely such a distension of the vessels should cease pretty soon after the muscles become relaxed, and the enlargement due to it alone would, therefore, quickly pass away. Does not the continuance of the swelling point to the supervention of some other event beyond the mere temporary distension of the vessels, such as the exudation of fluid from the blood into the substance of the muscle? There is some corroboration in support of such a view in the results of some experiments performed by Dr. Lazarus Barlow in the pathological laboratory at Cambridge in 1894 on the effects of Variations in the Volume of the Blood upon the Specific Gravity of Blood and of Muscle.[9] That observer increased the volume of the blood in two different ways: in one he anæmiated one or more limbs by the tight application of Esmarch's elastic bandages and thus forced whatever fluid, blood as well as lymph, that was in them into the general circulation; and in the other method he injected salt solution into the blood. The specific gravity of the blood and of the blood-plasma was taken by Roy's method, and that of the muscles by a modification of that method before and after the volume of the blood had been increased. The results obtained were a rise of the specific gravity of the blood and of the blood-plasma, and an invariable fall in the specific gravity of the muscle, the rise and fall being rapidly induced, the larger portion of them occurring within the first half hour. This observer, therefore, concludes that when the volume of the blood is increased the muscles take up water which is derived from the blood. In exercise the volume of blood circulating through the muscles is in all probability increased to a much higher degree than obtained in these experiments,

[6] Op. cit.

[7] Therapeutics of Circulatory Derangements, by Professor M. J. Oertel, M.D., translated by E. J. Edwards, M.D. (1878.)

[8] Pulse Gauging, p. 17.

[9] Proceedings of the Physiological Society, May, 1894. Journal of Physiology, 1894.

and therefore a most favourable condition exists for the rapid transudation of watery fluid from the blood to the muscular tissues. During the actual muscular contraction a portion of this exuded fluid is no doubt driven onward into the lymphatics by the pressure brought to bear on the lymphatic spaces by the contracting muscular fibres; but it is quite conceivable that a large quantity of that fluid may remain in the muscles for a considerable time after all muscular action has ceased. This position is furthermore corroborated by the changes observed in the blood as the result of exercise. These will be referred to in the fourth lecture. This matter may seem to possess a merely theoretical interest; but it is conceivable that it may have a somewhat important practical side which will be touched upon when an attempt is made to explain some of the beneficial effects to be obtained from the movement cures.

3. *Digestion.*—During the first hour after a full meal as a rule the radial pressure and calibre fall very considerably in the sitting and rise proportionately in the recumbent posture. The leading cause of this alteration on the radial pulse would seem to be the increased flow of blood to the digestive tract and the large vascular glands within the abdomen, which in the erect postures reduces the blood pressure in the upper half of the body mainly through the agency of gravity, but ceases to do so in recumbency, because in that posture gravity fails to operate. Mr. Leonard Hill by his valuable experiments on animals has demonstrated that the splanchnic vasomotor mechanism occupies an all-important place in compensating for the simple hydrostatic effects of gravity on the circulation of the blood produced by changes of posture, and that where the perfection of this compensatory mechanism is impaired the influence of gravity on the systemic circulation becomes of vital importance, so that in the feet-down position the blood drains into the abdominal veins and recedes from the upper portions of the body.[10] It would seem that during the digestive act a comparatively transient impairment of the splanchnic vasomotor mechanism—probably more pronounced in some individuals than in others—does take place; but in healthy subjects it is quicky followed by complete compensation—in fact, by over-compensation—for the primary fall in the arterial pressure is succeeded by a rapidly developed rise beyond the degree recorded before the meal, and this rise, which, corresponds with the acme of fulness of the systemic arteries, gradually subsides before the next meal is taken.

4. *Fatigue.*—The ordinary effects of change of posture in the healthy subject on the radial pressure and calibre have been described—namely, an increase of both in the sitting and a decrease in the recumbent posture. Every now and then, however, these measurements are observed to be reversed; and it has been found that fatigue is a common cause of this departure from the strictly normal formula of the postural measurement of the pulse. Repeated observation has shown that the essential fact in the transitory conditions of tiredness or fatigue is a diminution of the vasomotor compensation which at other times perfectly counteracts the hydrostatic effects of gravity on the distribution of the blood. In health this is but a passing phase of vasomotor inadequacy which finds restoration in the recumbent posture. It is, however, the embryo as it were of that persistent impairment of vascular accommodation which may be observed and measured by the arteriometer in many ailments to be referred to later.

5. *Menstruation.*—Throughout the menstrual period it has been repeatedly observed that the calibre of the arteries, as exemplified by the radial, ceases to respond to change of posture. Later it will be shown that this is a sign of arterial tension. Probably, therefore, during menstruation vaso-constriction invades the arteries and extends to those of middle size like the radial. This transitory phase of arterial contraction resembles that which is quite common for limited periods in the gouty and that which always accompanies attacks of *migraine*.

*Variations of arterial tension from the physiological aspect.*—The fundamental fact in regard to the circulation in normal subjects is that it is a system of elastic tubing which is never at any one time and in all parts filled with the circulating fluid, so that there always exists in every part a pretty wide margin for the production of the extremes of variation of pressure consistent with health, which may be induced by alterations either in the volume of the fluid or in the size of the tubing. In the central parts of this system it is highly probable that the blood pressure varies within much narrower limits than it does in the peripheral arterial tubes, in which it may be considerably increased or diminished according to the ebb and flow of the activity of organs, and that consequently the volume of the blood and the size of the peripheral arteries are continually varying in different parts of the body. Inasmuch as the functional activity of any one part affects not merely its own blood-supply, but influences that of every other part, the peripheral blood pressure must be an ever fluctuating quantity—within certain limits. The condition of the vasomotor mechanism largely determines the order which the fluctuations follow; and inasmuch as the most delicate test of the integrity or otherwise of that mechanism is afforded by the effects produced on the radial calibre and pressure by change of posture, that test has been adopted throughout this inquiry.

[10] Op. cit.

II.—*Pathological Variations of Radial Measurement.*

Observation has shown that when the radial calibre either varies repeatedly in the reverse order to that which obtains in health or persistently ceases to vary on change of posture some pathological condition may be inferred to exist; and that such deviations from the normal formula of radial measurement when persistent group together certain morbid conditions.

1. *The postural variation is reversed.*—It has been shown that in health the reversed postural formula of radial calibration is met with as the result of the digestive act, of exercise, and of fatigue. In all these instances there exists one common cause accounting for the reduction of the radial calibre in the erect postures—namely, diversion of blood—in digestion to the abdominal organs, in exercise to the muscles, and in fatigue to the lower parts of the body from impairment of vasomotor tone. In health this is but a passing phase of the distribution of blood. In disease it is also due to a diversion of blood, which is, however, of a less or more persistent character. The blood abstracted from the arterial side of the circulation in the erect postures gravitates into the splanchnic area and (to a less degree) into the veins of the legs. So that all the cases thus grouped together are characterised by impairment of the vasomotor mechanism. Mr. Leonard Hill has demonstrated that when paralysis of the splanchnic vaso-constrictors is brought about in animals, as by anæsthetics or by operative procedures, pressure applied to the abdomen by means of a bandage at once restores the blood pressure so long as the heart is normal or is not too weak to effectually propel the increased supply of blood furnished by the compression of the abdominal veins.[11] It has been repeatedly observed that when the radial calibre is reduced in the sitting posture the application of abdominal pressure, while the arteriometer remains *in situ*, will as quickly raise it to what it attains in recumbency as was the blood pressure restored by the same procedure in Mr. Hill's experiments. Furthermore, the same result is attained, as has been frequently proved, by making the subject in the recumbent posture execute a series of from six or more slow, prolonged, and deep inspirations after forced expiration, while the abdominal muscles are contracted as in the Italian method of singing—a form of respiratory gymnastics which apparently aspirates the blood to the heart, effectually compresses the abdominal veins, and induces a stronger stroke of the heart and an increased transference of blood from the venous to the arterial side of the circulation.[12] The following is an example of this restoration of the normal balance of the blood-supply to the arteries by this means:—

| | Radial calibre. | |
|---|---|---|
| | Sitting. | Recumbent. |
| Before forced respiration ... ... ... ... | 1·4 mm. | 1·9 mm. |
| After six forced respirations ... ... ... | 1·9 mm. | 1·4 mm. |

These observations indicate that when the vasomotor mechanism is impaired, as is shown by the reduction of the radial pulse in the upright postures, the blood unduly collects in the splanchnic area; in fact, a portion of the

[11] Op. cit.

[12] This procedure as a mode of treatment was brought to my notice by Dr. Edward Blake, who has, he informs me, successfully applied it for some years past in the treatment of dilated and weak hearts.

blood is thus abstracted from the arterial side of the circulation and is transferred to the venous side. What ailments are mainly characterised by the presence of this radial sign of a damaged state of the vasomotor mechanism? Observation has shown that it is commonly met with in anæmia, in all the various forms of nervous exhaustion, in the febrile state, in convalescents, and in cardiac incompetency. It would seem that the underlying pathological condition is asthenia, and especially asthenia which springs from impoverishment of the blood or from denutrition of the nerve-centres. These are the forms of asthenia in which the reversed radial measurement is observed most frequently, and they ramify through a large group of cases, and, therefore, embrace a considerable section of clinical observation. It has been found that this radial sign of asthenia is pretty constantly present in that form of nervous debility which now passes under the name of neurasthenia and in closely allied ailments of the nervous system. It is, therefore, probable that in cases of this type a paretic condition of the vasomotor constrictors is a prominent pathological feature, which may, moreover, in a great measure account for many of the symptoms which such cases manifest. In the erect postures the reduced supply of blood to the arteries which are distributed to the upper portions of the body, and the drain of blood into the lower parts, and especially into the abdominal area, will undoubtedly favour the development of cerebral anæmia and the occurrence of various abdominal disturbances and ailments to which the sufferers of denutrition of the nerve-centres are so liable. Influenza during the past seven years has developed a large crop of these cases; and it has been an easy matter to trace the debilitating effects of this disease on the mental and physical system, so ably pourtrayed by Sir Dyce Duckworth in his recently delivered Lumleian Lectures, to vasomotor paresis the result of impaired nutrition of the nerve-centre. The gravitation of blood into the splanchnic area in anæmia and neurasthenia will doubtless foster the prevalence of digestive and intestinal disorders. In cases of vasomotor inadequacy it is not at all an uncommon observation to find the liver slightly enlarged and with a tender margin. Thirteen years ago Germain Sée[13] recorded the proneness of neurasthenic subjects to dilatation of the stomach; and in more recent years the same clinical association has been pointed out by Dujardin-Beaumetz,[14] Champagnac,[15] and quite recently by A. S. Eccles.[16] The last observer has, moreover, shown that "a large proportion of the gastro-intestinal cases successfully treated by the 'rest-cure' have been associated with neurasthenia."[17] This leads me to say a word on the value of recumbent rest in the treatment of all cases in which the maximum radial calibre is habitually present in the recumbent posture. The augmented supply of arterial blood to the tissues, and especially to the impoverished nerve-centres, which obtains in these cases when the recumbent posture is assumed, should prove remedial, and the results of observation have distinctly shown that this is the case. In exceptional cases of this type absolute rest should be adopted for a time, but when exercise is feasible the proper adjustment of it tends to accentuate the restorative value of recumbency which is enjoined between whiles. Inasmuch as the arteriometer has shown that in these cases of damaged compensation the sitting posture maintains the mal-distribution of blood, which perpetuates many of the symptoms, it is obvious that that posture does not secure physiological rest at all; it should, therefore, be abolished for a time and should be replaced by recumbency, in which the blood is fully and normally distributed, or it should be alternated with exercise under strict rule. This direction may seem to be too trivial to deserve notice. Having, however, so frequently proved the value of this physiological means of adjustment of the circulation in cases of vasomotor inadequacy I trust this passing reference to it may not be out of place.

2. *The calibre is uniform or is greatly restricted in posture.*—In health the radial calibre is very rarely free from variation on change of posture; and should such a condition be observed it is, moreover, quite transitory. In clinical observation, on the other hand, an unvarying radial calibre is frequently to be met with, and when persistent it always signifies some important pathological condition. It may come and go or it may be persistent.

(1) *Temporary uniformity* is often met with as a result of vasomotor contraction and the consequent rise of arterial tension. Good examples are afforded by migraine and by passing gouty states. When the contraction is chiefly peripheral or terminal the radial blood pressure rises; but when it involves the radial itself the blood pressure within the artery generally falls, but rises in the central arteries. Observation has shown that in chronic gout the radial calibre may be large and uniform with raised blood pressure, or it may be small and uniform with a normal or subnormal blood pressure. When the gouty state is relieved and there is no arterio-sclerosis present the uniformity of the calibration in both classes of cases gives place to variation and the blood pressure in the first falls, while in the second it may rise. Transitory attacks of high arterial tension of apparently peripheral origin (probably constrictive in nature) are of frequent occurrence in the elderly;[18] and it has been observed that throughout each attack the radial calibre becomes fixed, while in the intervals postural variation reappears. The subjects of such attacks, though they may themselves be free from the ordinary manifestations of gout, frequently belong to families in which a history of true gout exists. It has been observed that in transitory tension a rise in radial blood pressure of a little over the normal variation for posture (30 mm. of Hg.) will determine postural uniformity in the calibre and that when this excess disappears the arterial wall will once more respond to change of posture.

(2) *Persistent uniformity* characterises an important group of diseases. The predominant cause is not, as in temporary uniformity, tonic muscular constriction, but a structural change in the arterial wall. The blood pressure may or may not be increased. Observation has shown that this invariability is exceedingly common in arterio-sclerosis, either alone or accompanying chronic interstitial nephritis, angina pectoris, or chronic gout, and in acquired syphilis. In arterio-sclerosis it has been observed that even the presence of a very marked degree of anæmia, as may be met with in chronic Bright's disease, does not prevent the postural invariability of the calibre from manifesting itself, even though it is found that in such cases the blood pressure is higher in the recumbent than it is in the sitting posture. The size of the lumen of the artery is largely determined by the blood pressure; but in all cases after a time it diminishes very considerably. Acquired syphilis differs from arterio-sclerosis, however, in the fact that the calibre shrinks to a far greater degree, especially after the lapse of several years from the primary infection, and especially, too, when the disease is producing its secondary and tertiary manifestations; a reduction to one-half of the measurement, which it may again acquire after treatment by mercury, has not infrequently been observed.

III. *Radial Measurement in Experimental Physiology.*

The arteriometer has afforded useful aid in several lines of inquiry. I will illustrate this position by describing the effects on the pulse of anæsthetics, vaso-dilators, the animal extracts, massage, resistive movements, electricity, and baths.

*Anæsthetics.*—A number of observations made on the effects of anæsthetics on the radial calibre has shown (Fig. 3) that ether increases while chloroform reduces it. Nitrous oxide occupies an intermediate position, causing a slight rise which may be followed by a fall; the fall, however, fails to be detected when the gas is inhaled along with oxygen.[19] Oxygen, like ether, enlarges the calibre. The A.C.E. mixture reduces it, but to a less degree than chloroform. Mr. Leonard Hill has shown experimentally that the two anæsthetics, ether and chloroform, differ very markedly in their effect on the vasomotor mechanism. While chloroform rapidly paralyses compensation and damages the heart ether does not in moderate amounts impair the vasomotor mechanism, and only does so very gradually and to a limited degree when pushed in enormous amounts, and it, moreover, stimulates and maintains the heart's action.[20] This difference in the physiological action of these anæsthetics suffices to account for the reduction of the radial artery by chloroform

[13] Des Dyspepsies Gastro-Intestinales. 1883.
[14] Journal de Médecine de Paris, 1889.
[15] Gazetta degli Ospitale, Naples, 1891.
[16] The Relationship between Digestion and Neurasthenia (Dilatation of the Stomach and Constipation), by A. S. Eccles, M.B., Proceedings of the Royal Medical and Chirurgical Society, London, 1894.
[17] The Practice of Massage, p. 150.

[18] Professor Clifford Allbutt refers to cases of this type under the denomination of Senile Plethora, Brit. Med. Jour., vol. i., 1895, p. 535.
[19] Dr. Frederic Hewitt advocates the inhalation of the mixed gases. See On the Anæsthetic Effects of Nitrous Oxide when Administered with Oxygen at Ordinary Atmospheric Pressures, with Remarks on 800 Cases, 1892.
[20] Op. cit.

on the one hand and for the augmentation of it by ether on the other. The practical application of these observations will be obvious. The position of the abdomen in relation to the head must be of much greater importance in chloroform than in ether anæsthesia; for in the former the splanchnic drain will be much increased in the vertical posture, or even when the head and shoulders are raised somewhat above the abdomen, while in the latter, unless the ether has been administered in large quantity or for a prolonged period, there is no undue collection of blood in the

FIG. 3.

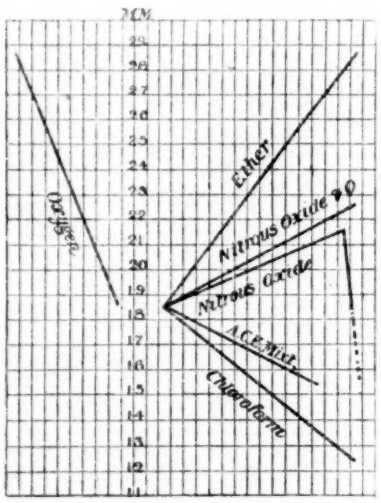
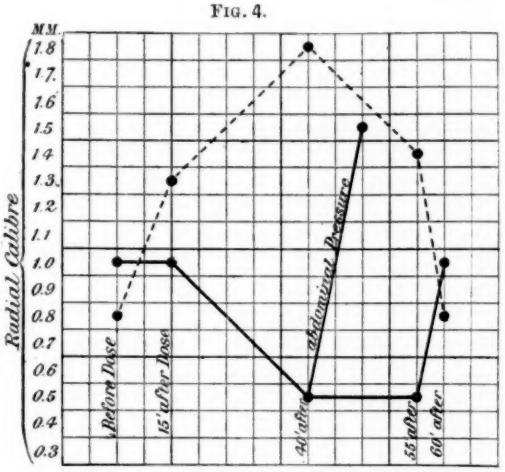



Diagram showing the average results of observations on the effects of anæsthetics on the radial calibre.

abdominal area. It has been shown that deep inspiration and also that abdominal compression reduce the veins when containing an excess of blood; hence the value of artificial respiration and of pressure over the abdomen when death is threatened by vasomotor paralysis during chloroform anæsthesia, and hence also the utility of that most favourable sign, the act of vomiting, which is a most efficient mode of abdominal compression.

*Vaso-dilators.*—Some few observations with the arteriometer have indicated that the nitrites and nitro-glycerine rapidly lower the radial blood pressure and calibre. Fig. 4 shows that the action of $\frac{1}{100}$th grain of nitro-glycerine is rapid and decisive and lasts but a short time; in this case not beyond an hour. Why is the calibre of the artery reduced? This result may be explained by the lessening of the blood pressure within the artery consequent on dilatation of the peripheral vessels. This fact has been proved by perfusion through excised organs, and was ably illustrated by Professor Leech in the Croonian Lectures of 1893. Inasmuch as the radial artery is but a conduit between the heart and the peripheral vessels, the blood pressure within it necessarily falls as these dilate, and the calibre of it is thus correspondingly reduced. From the observations made it would, however, seem that the vaso-dilatory action extends to the splanchnic area, so that in the erect posture a large amount of blood gathers in the capacious veins within the abdomen and largely contributes to the reduction of the systemic arteries. This position is supported by two facts: the enormous rise of the radial calibre when the subject assumes the recumbent posture and the production of a similar rise in the sitting posture by the application of pressure to the abdomen. In the Bradshaw Lecture delivered before this College in November last Dr. Bradbury ably supported the claim of the solid organic nitrates (erythrol tetranitrate and mannitol hexanitrate[21]) as vaso-dilators of more enduring action than those in present use, and therefore more likely to prove useful than they in the necessarily somewhat continued treatment of several morbid conditions associated with increased peripheral resistance. Dr. Bradbury showed as the result of perfusion experiments on excised organs and of sphygmographic observation that the vaso-dilator action of these substances was, though less energetic and slower to manifest itself, very much more prolonged than that of the nitrites and nitro-glycerine. With the view of comparing the action of the

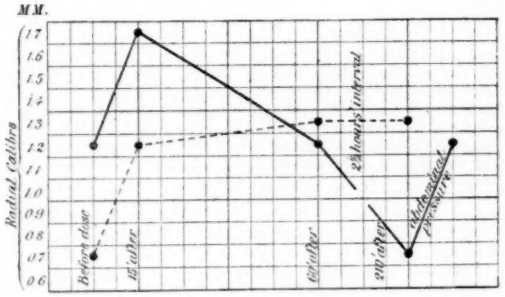
FIG. 4.




The effects of nitro-glycerine (gr. $\frac{1}{100}$) on the radial calibre. Subject, a woman suffering from Raynaud's disease. Calibre sitting = continuous line; recumbent = interrupted line.

solid organic nitrates on the arteries by the side of that of nitro-glycerine some observations were made with erythrol tetranitrate on the same subject[22] which provided the data recorded in Fig. 5, and the results obtained, though obtained by totally different methods, entirely support Dr. Bradbury's conclusions. It has been shown that the vaso-dilator effect of nitro-glycerine is already pronounced within fifteen minutes (Fig. 4); but it requires the lapse of sixty minutes

FIG. 5.




The effects of erythrol tetranitrate (1 gr.) on the radial calibre. Subject as in Fig. 3. Calibre sitting = continuous line; recumbent = interrupted line.

before it becomes established after swallowing one grain of erythrol tetranitrate, when, indeed, that of nitro-glycerine has completely passed away; and, furthermore, after the lapse of three and a half hours it is still well maintained with some probability of continuing some hours longer, though no later observation was made. The relative vaso-dilator activity of nitro-glycerine and erythrol tetranitrate are expressed in the degree of reversals of the postural

[21] These substances are obtained by nitrating the alcohols or corresponding compounds by means of a mixture of nitric and sulphuric acids at a low temperature.

[22] I am indebted to Dr. Fletcher Little for the opportunity of making these observations on a case of Raynaud's disease under his care at the Temperance Hospital.

measurements. The reduction of the blood pressure—especially of the minimum pressure—produced by the vaso-dilators affords to the finger an illusory impression of enlargement of the artery.

Professor Leech, in his second Croonian Lecture (1893), in referring to this point, says: "How are we to account for the markedly greater distinctness of the pulse which is so often noted after nitrites and for the increased height in the upstroke (the so-called 'percussion wave') of the tracing which is almost invariably seen after small doses of the nitrites?" He refers this change in the pulse to two causes—namely: (1) dilatation of the arterioles, which induces a more complete collapse of the artery and an increased difference between its systole and diastole both to the finger and in the tracing; and (2) relaxation of the artery itself. "The difference between the calibre of the artery in systole and diastole being augmented it is felt to be more distinct and more full." This explanation accords with the results of my observations, only I am led by them to regard arteriolar dilatation as sufficient to account for all the facts of the case. The vaso-dilators afford the most satisfactory experimental evidence of the manner in which the postural formula is reversed in various pathological conditions, all characterised by a reduction of vasomotor tone which impairs compensation for gravity.

# Remarks
UPON
# THE PRESENT SYSTEM OF MEDICAL EXAMINATIONS.[1]

BY T. PRIDGIN TEALE, F.R.C.S.ENG., F.R.S.,
CONSULTING SURGEON TO THE LEEDS GENERAL INFIRMARY.

"That the present system of accumulated examinations and the enormous increase in the number of rejections resulting from it are not only unjust to the student, but damaging to medical education; therefore, that the time has arrived when the General Medical Council should consider (*a*) how far examinations and the occasions of rejections can be reduced in number; (*b*) how far, whilst maintaining effective examinations in those subjects which it is essential that every medical man should 'know' and 'retain the knowledge of,' it is possible to withdraw from the sphere of public examination several other subjects which it is desirable that every medical man should 'know about,' but with the details of which he need not permanently burden his mind, the 'bird's-eye survey' of such subjects being ensured by compulsory short courses of lectures with class examinations certified by the teacher."

GENTLEMEN,—The motion which stands in my name is substantially the same which was proposed at the last session of Council, the discussion of which was postponed at my request. Since the motion was placed upon the programme of business two events have happened which go some way to justify the course taken. Two subjects, which would have been occasions of rejections, have been withdrawn from their scheme by the most important examining body in the United Kingdom, the Conjoint Board for England. These subjects are the examination in elementary anatomy at the end of the first year of study and the proposed examination in pharmacology as a new and separate subject for rejections in the final examination. In proposing such a motion I am undertaking a serious responsibility, not only in raising the question at all, but also in occupying the time of the Council with what I have to say. As to the latter point members of Council—and not least the older members—will bear me out when I claim to have occupied during my twenty years of service here but little time in making speeches. On the former I wish to state views which have been forcing themselves upon my mind more and more, silence about which on my part might be blameworthy, and for the utterance of which no fit opportunity has heretofore seemed to have arisen. During the past twenty years the Council has added to the subjects which have of necessity to be examined upon, has doubled the number of examinations which have to be passed, has by its visitations and inspections increased the stringency of examinations—i.e., has caused a higher percentage of rejections—and, finally, has added one year to the medical course. All has been done with this object—that the medical practitioner may be turned out a more perfect article and that incompetent men may be excluded from our profession. You may rightly ask on what evidence such opinions as are expressed in the motion are based. They are based upon: 1. The statistics of rejections as reported to this Council. 2. The fallibility of examination in respect of (*a*) the element of chance; (*b*) the inevitable hurry with which a great portion of our examinations have to be conducted; and (*c*) the unsuitable misguiding questions which appear in examination papers. 3. The interference with clinical work. 4. The probable working out in practice of the five years' course. 5. The cost to parents of multiplied rejections.

Let us take the first point, "the statistics of rejections," and inquire what lessons they teach and see what has been the attitude of the Council towards this question. On May 25th, 1876 (Minutes XIII., p. 135), it was moved by Dr. Andrew Wood and seconded by Mr. Quain and agreed to: "That the table showing results of examinations for degrees, diplomas, and licences granted in 1875 by the bodies in Schedule A of the Medical Act be referred to a committee to consider the table of results with reference to so large a number of rejections and to report thereon." And what was the large number of rejections that moved the concern of the Council? It was this, that the percentage of rejections in the final examination had risen from 12·4 per cent. in 1862 to 22·2 per cent. in 1876 and had become practically double. At the present time, twenty years later, they are 38 per cent. The committee reported on June 5th (Minutes XIII., p. 261) suggesting that the executive committee should obtain information from the licensing bodies on several points bearing upon the question. The executive committee on July 7th (Minutes XIII., p. 341) addressed a letter to the several licensing bodies on the results of professional examinations. On March 9th, 1877 (Minutes XIV., p. 277), Professor Humphry was requested by the executive committee to report upon the answers from the licensing bodies. This report (Minutes XIV., p. 64) was presented to the Council on May 16th, 1877. As an outcome of this report the Council "recommended" that there should be three professional examinations (Minutes XIV., p. 99) and that a committee should be appointed (p. 110) to consider the subjects of professional examinations to be required and the limitations of the range of the subjects by schedule. Again, in 1880, after a resolution of the Council to resume the visitation of examinations, it was moved by Professor Humphry and seconded by Dr. Rolleston and agreed to: "That it be a direction to the executive committee to instruct visitors to inquire into the causes of the rejections which appear in the annual returns" (Minutes XXII., p. 152). The percentage of rejections at the final examination had in that year risen to 28 per cent. Lastly, on May 24th, 1883 (Minutes XXX., p. 52), a resolution, moved by Dr. Heron Watson and seconded by Dr. Bruce, was carried: "That the tables of rejections of the programme, May 23rd, 1895, be referred to the Examination Committee with a view to prepare a statistical statement of the percentages reported in previous years as well as those since the passing of the Medical Act, 1886," &c. The primary object of this resolution was to find an explanation of the variability of the percentage of rejection in the several examinations. The outcome of the investigation by the Examination Committee was practically *nil*, except in one respect. A most striking table of the rejections reported to the Council from the year 1861 to the year 1892 was drawn up by our registrar, which to my mind speaks volumes, although its message seemed to fall on deaf ears in the committee. What do we find in this document? Taking final examinations only, in 1861, rejections 12·4; in 1870, 22·2; in 1880, 28·9; and in 1892, 38·9. But there is another point in all this. In 1861, with very few exceptions, the licensing boards granted their qualifications after one examination only, whereas in 1892 every board held at least three separate examinations, not to speak of subdivisions, so that we have in the year 1892, besides the 38·9 per cent. in the final, 47·1 per cent. in the second and 37·1 in the primary. Let us put it in another form. In 1892

[1] These remarks were made by Mr. Teale at the meeting of the General Medical Council on June 2nd in support of a resolution with regard to the present system of medical examinations, moved by himself and seconded by Dr. Pettigrew.

there were 9820 examinations and 4028 rejections, affecting at the outside about 2000 students, assuming that the whole number registering went through to the final examination. And so it comes about that every student, if he took his share of plucks, would be rejected twice in his career. And this calculation takes no account of the further subdivisions beyond those required by the Council, which entail a third pluck per man. There is a still further aspect of this question, the continuous rise in the percentage of rejections. Take each fifth year: 1861, 12·4; 1866, 14·5; 1871, 16·6; 1876, 22·2; 1881, 31·0; 1886, 34·8; and 1891, 39·3. "Quousque tandem?" It reads as if the more we multiply examinations the more fatal the final examinations become. Is the quality of medical training deteriorating or are the examinations becoming more fallible as tests?

This leads me to my second point: "The fallibility of examinations." There are three aspects in which many of our examinations seem to be faulty: (*a*) in the element of chance which is more or less inseparable from all examinations, even the best; (*b*) in the inevitable hurry with which a great many are conducted: and (*c*) in the unsuitable, misguiding questions which are frequently set.

*a*. On the element of chance I will not delay you long, merely quoting from a scientific exponent of statistics, Professor Edgeworth, who has discussed the point in a paper, the Element of Chance in Competitive Examinations.[2] As a result of a careful inquiry, partly statistical, partly from observation and comparison of actual facts, he says, speaking of the examinations for the Indian Civil Service, the Army, and Home Civil Service: "I find the element of chance in these public examinations to be such that only a fraction—from a third to two-thirds—of the successful candidates can be regarded as quite safe above the danger of coming out unsuccessful if a different set of equally competent examiners had happened to be appointed. A corresponding proportion of the successful—from two-thirds to one-third—must be described as unsafe. A rather larger number of the unsuccessful candidates would have a chance of succeeding at a re-examination." "This question may also be asked: What number of displacements is most likely to occur in the event of re-examination? The answer in some cases which I have scrutinised proves to be about one-seventh part of the successful." Again: "It may surprise even experts to hear that, as between two examiners, A. and B., who, upon the whole, are fairly well abreast, occasionally A. is ahead of B. and B. ahead of A. to the extent of 50 per cent." "It may be added that we have taken no account of what may be called extraneous elements of chance, such as the possibility of the candidate being out of sorts on the day of examination or of the questions being unfavourable to him."

As regards (*b*) the inevitable hurry, seeing how much we have undertaken in the way of examinations, it is more or less unavoidable—an "inseparable accident," as logicians would say. But it exists in varying degrees. It is less in the bodies who examine few candidates, more in the case of those who have to deal with large numbers, until it culminates in the—what shall I call it?—of the ten minutes' passing bell of the London Conjoint Examination, a patent device for making overwrought candidates nervous and for gaining it the unenviable reputation of not infrequently rejecting good men and passing inferior ones. One may fairly ask, "How can it be otherwise considering the amount of work which has to be got through?" And what a work. Let us look it in the face. In 1892 there were 9820 examinations of individuals. In each there would be on the average, I suppose, three subjects, which means 29,460. At least half of these subjects would involve a written, a practical, and an oral examination. So we must add two functions to one-half or one function to the whole, which doubles it, making 58,920 items in one year. How can this mass of work be done properly? What an array of examiners has to be employed. How can we guarantee that they are all fit for their work? There is no known means of testing their judgment, their appreciation of what ought to be required of a candidate, their appreciation of the fact that by the questions they set they in a great measure determine the future study of those who are coming forward. Are the questions set always unexceptionable from the point of view either of testing work or of setting the standard of future work?

This suggests the consideration of (*c*) unsuitable, misdirecting questions. Let me select a few from my museum of interesting specimens. We will begin by making a study of questions set to first-year's students, and as a preface to this let me quote a passage from Sir George Humphry's Report on Rejections (Minutes XIV., p. 68): "The burdening of the memory with mere facts which have no direct or obvious connexion with science or practice—with facts, that is, unassociated with ideas or practical utility—is, on the whole, of little value educationally or otherwise, and such facts make but a transient impression on the memory. Laboriously crammed together, with efforts worthy of a better purpose, they are with difficulty held until the examination crisis and then quickly escape with little regret at their departure. Indeed, the examination in each subject of professional study should be restricted to the general principles and the more important facts of the science, and should be of such a character as to induce students in their preparation for it to observe and think for themselves more than is now commonly the case. The examinations should be regarded from an educational point of view, with reference, that is, to the influence which they are likely to exert upon the character, the education, and the mental training of the students who are to come after, as well as with reference to their being a test of fitness for admission to the Medical Register." Perhaps the choicest examples of misdirected energy are to be culled from the questions set in "Materia Medica." And please remember that they are set for first-year's students, who are supposed never to have seen a sick human being except by accident, and under our present degenerating system, as I should call it, are discouraged from entering the wards of a hospital or the operating theatre during their first two years.

*Questions.*—"Name six of the most important emetics. What dose of each is necessary to induce vomiting, and how is it best administered?" "What is an enema? State the composition of each of the following," naming three, of which one is "enema magnesiæ sulphatis." This examiner seems to be enamoured of "enema magnesiæ sulphatis," as he asks the question again the year following. I wonder how many of those present here ever prescribed "enema magnesiæ sulphatis." "Contrast the physical and chemical properties of castor oil and oil of turpentine." "Name the pharmacopœial preparations into which potassii tartras acida enters and give their doses. Describe the action of this drug." "Give an account of sulphur, including its origin, physical properties, official preparations, and doses." "What is 'Lini farina'? Give its source and enumerate all the preparations into which it enters." Happy "linseed meal," it will hardly recognise itself when set on such a pedestal of honour. Let us take leave of Materia Medica for first-year's students with one quotation from a report of our inspector and a visitor: "The dosage of various drugs—including picrotoxine, phenazonum, apomorphine hydrochloras, &c.—many of which first-year's students probably never heard of. The majority of the questions could not be fairly included in the subject of Practical Pharmacy, as generally understood at the first examination of a student of medicine, although perfectly legitimate at the examination for the licence of a pharmaceutical society." And this is the kind of rubbish that the elaborate and costly machinery of a public examination has to waste its energies upon. I have a few morbid specimens from the Elementary Physiology Examination of the English Conjoint Board, but, thanks to the prevalence of good sense, this examination, as well as that in Elementary Anatomy, has disappeared.

From the questions set in physiology at the end of the second year I have selected three which seem to me to be open to criticism on principle as tending to cram. "Explain the terms myopia, hypermetropia, astigmatism. How would you correct these errors of refraction?" "Describe the appearances of the interior of the larynx as seen by the laryngoscope. What changes are noticed in phonation and respiration, and how are they brought about?" "What sounds can be heard on applying the ear to the chest? Explain exactly how they are caused." For my part I do not see how these questions can be answered except by means of mere verbal cram by those who cannot have worked clinically at "refraction," "laryngoscopy," and "auscultation." It is, however, when we come to the rather fancy subjects, such as hygiene and medical jurisprudence, that we meet, in the later stages of medical education, with the most questionable questions. In hygiene, for instance: "What do you understand by the expressions 'effective population,' 'dependent population,' 'density of population'?" "What impurities of a deleterious character are found in bread?"

[2] Journal of the Royal Statistical Society, September and December, 1890.

"How ought a hospital to be constructed in order that each patient may have an efficient supply of pure air?" "Define the word 'nuisance' according to law. Show the different statutory provisions under which nuisances may be dealt with." "How will you dispose of the house-refuse (liquid and dry) of a large urban district?" Questions such as these are suitable enough in an examination for a diploma in Public Health, but are unpardonable when set for medical students. There is one more question to which I will take the liberty of suggesting the answer: "In the event of cases of typhoid fever occurring in a family what steps should be taken to ascertain that the water-supply and sanitary fittings are in proper order." My answer is—what I should do myself in such a case—"Send for the sanitary inspector."

Then as to Medical Jurisprudence, were an examiner to restrict his questions to those parts of the subject which are really useful in practice and with which in ordinary life a medical man is brought into contact, such as making a will, giving evidence in court, dealing with the insane, or with the apparently drowned, attempted suicide, and such like, he would be almost driven to give the same questions every year. As it is he goes forth into matters which probably never come before one practitioner in 10,000, and even then, no doubt, such practitioner would be obliged to refer to his book. For instance: "What are the effects produced on the living body by intense cold? What post-mortem appearances have been observed when death has resulted?" "Describe the symptoms and post-mortem appearances presented in a case of death from starvation."

With regard to the Final Examinations in the practical subjects of Medicine, Surgery, and Midwifery, it is an interesting fact that I find but few questions to criticise, but there are one or two comments I would venture to make as expressive of my own opinion. I will quote one question from a surgical and one from a midwifery and gynæcological paper: "Mention the complications which may be associated with chronic suppuration of the middle ear and describe the operation for opening the mastoid antrum." "Describe the operation for vaginal extirpation of the uterus." Now the setting of these questions for an ordinary diploma would seem to imply that they were operations that anyone might do without any more preparation than an ordinary student would get in reading for his pass examination, whereas they ought only to be attempted by men seriously intending to do the more advanced surgery. The "conclusion" of the three Visitors in 1882 on a similar point, in reference to operative surgery in an ordinary qualifying examination, seems to me to be a sound one. "That for every 'm'nimum' qualification the examination in operative surgery should be confined to emergency operations such as any practitioner may suddenly be called upon to perform—e g., amputation, deligation of arteries, catheterism, urethrotomy, tracheotomy, &c., and should for the most part exclude complicated operations not of sudden urgency, such as ovariotomy, excisions of joints, plastic operations, lithotomy, lithotrity," (Vol. XIX., Visitation Report).

Let me conclude this part of my speech with another sentence from Professor Humphry: "Every question put must be regarded as a drop in the educational current of the future, and examiners must recognise that they are not simply judges of the students who come before them, but that they are in no less degree directors of, and so responsible for, the teaching of those who will follow" (Hunterian Oration).

My third point is, "Interference with clinical work and practical training." So far we have been dealing chiefly with facts and statistics. The next point does not admit of statistical proof and is one of testimony and inference. It is an opinion several times expressed to me by clinical teachers, and confirmed by young men who have recently completed their medical education, that advanced industrious students are unable to devote sufficient time to work in the wards and to self-training because they dare not tear themselves away from the drudgery of book-work, dreading failure in the examination. As a result of this deficiency in clinical training and the want of a larger element of self-education I frequently hear bitter complaints from medical men in country places who find their newly-fledged assistants woefully deficient in their fitness and adaptability to practice. They can talk about bacteriology and recondite neurology, but they have not the capacity for simple observation of the cases that come before them, or the power of turning to profitable use the knowledge they have acquired during their career as students. Testimony such as this may not be—is not—exact evidence; but as a contribution to the evidence, though a small one, I give it for what it is worth.

On this point let me quote a hospital surgeon, Mr. Tobin of Dublin. In his Introductory Address at the opening of the Session 1895–96 at St. Vincent's Hospital he says: "It thus appears that there are two stages in the curriculum—a preliminary scientific stage and a stage devoted directly to medical problems. It is with this second stage that I, as a hospital teacher, am most concerned, and the question that I ask you to consider with me to-day is this: Does the student spend his time during this stage to the best advantage? As far as I can see he does not, for, in place of being relegated to the hospital for his training during this second period, he is obliged to attend the school for theoretic lectures in medicine and surgery and for examinations in connexion with these lectures, and these examinations so dominate his views that he spends his time in hospital, not watching the changes in his patients, but on the look-out for ready-made answers to questions. If urged to make records of cases he does so reluctantly, for he knows that, from an examination point of view, it does not pay; and if, towards the conclusion of his course, he is offered the position as resident pupil in a large and busy hospital he often refuses it, because he is going in for his 'final,' and, of course, the one thing essential is to pass. His medical education, therefore, notwithstanding a large amount of hospital attendance, is literary rather than practical." "Moreover, education as at present conducted teaches us to see with the eyes of others rather than with our own. Further, the regulations are armed with a revolver in the shape of examinations, which enforces the obedience of students. Nothing else could keep alive such a system—one which, as it were by violence, keeps theory and practice apart."

Akin to this question of impairment of clinical study, and really a part of it, is the general outcome of our present system. Let me quote from the report of our visitor and inspector on the final examination of one of our leading universities, whose candidates have gone through a three years' course in arts before becoming medical students, and who, if any, ought to show satisfactory results of medical training. The report says: "In no case was the answering of any of the six candidates we heard examined brilliant—in the majority it was poor; but they had a sufficient knowledge of clinical medicine to warrant the examiners in passing them." In an examination of a conjoint board the visitor and inspector report: "Many of the candidates appeared to have a mere book-knowledge of these subjects; and when asked to explain their answers or to give some reasons for the statements they enunciated as if by rote were unable to do so."

Sir William Stokes, in opening the session at Meath Hospital in October, 1895, made the following statement as the result of his long experience as a teacher and as an examiner: "The student, wearied and weighed down by an accumulation of courses, and with the sword of Damocles in the shape of an annual examination ever hanging over his head, has neither time nor inclination to do anything that, in student parlance, will not 'pay' in the examination. It seems to me that the outcome of most modern changes in medical education is in the direction of making students read, not few books well, but many books badly, and that the brain has been looked upon too much as an organ with an unlimited capacity for retaining, digesting, and absorbing, in a given time, every ascertained fact, not only of medicine and surgery, but also of all the sciences auxiliary to medicine. The attempt to carry out the arrangement is fraught with real injury to many, with disaster to some. I can speak with some confidence on this subject after a long experience both here and in Oxford, and I have satisfied myself over and over again that the failure of a large proportion of candidates to answer up to the required standard was due, not to want of diligence and honest conscientious work on their part, but simply to brain exhaustion from attempting to overload it with facts which were believed to be essential."

Professor Mitchell Banks, a member of Council of the Royal College of Surgeons of England, for five years a most valued colleague on this Council, and an experienced teacher and examiner, said in an address to the Yorkshire College Medical Society in October, 1895: "When I began teaching in Liverpool the primary examination of the College of Surgeons consisted of little but anatomy, the physiology required being small in amount,

The students did a great deal of dissection and I was often surprised at the extent and accuracy of their anatomical knowledge; but for many years they have been steadily deteriorating in their knowledge, and I have been quite pained to note that when they came to be dressers in hospital their whole knowledge had vanished in a few months. It is the same as regards physiology. One department alone—that relating to the nervous system and to electrical experiments therein—is now more extensive than the entire subject was in my student days; but what is the result? Endless time is spent in galvanising frogs and making tracings on drums, whilst only the other day a physician complained that his clerks seemed to be ignorant of the simplest functions of the liver and kidney."

Dr. Haycraft, Professor of Physiology in University College, South Wales, in his introductory address in 1893, said: "In my opinion the medical student is overworked and badly worked. His examinations are in many cases foolishly detailed, entailing useless labour on his part, and any change that I should advocate would bring him less rather than more routine work." "Physiology has now become more than the rival of anatomy in the needless tax it lays upon the student's time."

We now reach the fourth point, "the five years' course." Let us consider how the five years' course will work out in practice. When in 1890 the Council added one year to the previous minimum of four years the aim of the Council, or at any rate the aim of many who were anxious to impose an additional year of study, was that this year should be a clear opportunity for clinical work at a hospital or for work partly clinical and partly as pupil to a registered practitioner, freed from the ordinary anxieties attending preparation for a bookwork examination. This fifth year so employed was to be the make-weight that was to compensate for what we have lost in the disappearance of the apprenticeship and of pupilage and the practical discouragement of clinical work during the earlier years of medical study. That it may be such a year is possible, but for most students it will have to be a sixth year, not a fifth. And why? As soon as the fifth year was added what did we do? We allowed a new subject—biology—to thrust itself into the first year, which would so occupy the time and energies of most students that they would have very little chance of passing in anatomy and physiology at the end of the second year. Hence the possibility of clearing off the medicine and surgery at the end of the fourth year being lost the fifth year must be frittered away on ordinary examinations and the clinical year becomes a sixth. The same result must happen to those who are plucked more than once—and the average student is plucked at least twice in his career, whether he be industrious or not. Some may maintain that such a result would be good, inasmuch as it would prolong their medical education and make them more fit for practice. I for one very much doubt it. Real education only begins when examinations have ceased, and I doubt whether, for the average student who is to become the family medical man, his chances of making a good practitioner do not grow worse instead of better by the prolongation of the time spent in school and hospital under pressure of examination.

The fifth and last point for consideration is "the cost to parents of multiplied rejections." This is an aspect of the question which I have never seen stated and one which doubtless in the opinion of many ought to be entirely ignored. It is worth being stated, nevertheless, and to some persons may be somewhat startling. Let us take the report on the Final Examinations in Medicine, Surgery, and Midwifery of the Conjoint Board for England of 1894. In medicine, out of 865 candidates, 365 were rejected—42 per cent.; in surgery, out of 916 candidates 388 were rejected—42 per cent.; in midwifery, out of 831 candidates 264 were rejected—32 per cent. Thus we have a total of rejections of 1017 out of 2612 examinations. Assuming that in every instance the candidate went up for re-examination, these re-examinations impose upon parents and others a cost of £4784 in one year in the final examination of one conjoint body representing two out of twenty licensing bodies. Nor is this all. Some of the rejected candidates have to take out fresh attendance tickets at their hospital, involving the expenditure of several guineas for an additional three or six months' clinical practice. And even this is not the limit of expenditure for those who come up from provincial schools. For these we must add return railway fare and the cost of living in London some five or six days. I know not how far I may have convinced the Council that under our responsibility medical education is drifting in a wrong direction, or whether I can persuade it, seeing clearly the evils that exist, boldly and with true statesmanship to face the question and find and apply the remedy. Surely our ponderous machinery, like the mountain in labour, is producing the "ridiculus mus." "Propter vitam vivendi perdimus causas." Losing sight of the end and aim of our educational machinery, we are worshipping the means and making them our golden calf. In what direction shall we look for release from this incubus? On what lines can we plan amendment? *We must decentralise.* We must unload our public examination. We must relegate to the schools not only to teach, but to examine and to certify in all secondary subjects, such as elementary biology, materia medica, pharmacy, hygiene, perhaps even chemistry, and certainly forensic medicine. Then let *ail the rest* be covered by three public examinations—one in anatomy and physiology, presumably at the end of the second year of professional study; one in pathology and therapeutics at the end of the fourth year; and the clinical examination in medicine and surgery, together with the examination in midwifery (truly in midwifery, not in fancy gynæcology), at the end of the fifth year. Surely after that we may see the ten minutes' bell and all it implies abolished. The licensing bodies will be able to afford to examine more thoroughly, less hurriedly, to find out what a student really knows, and to re-examine those on the border line of pluck or pass. Then, when plucking examinations are reduced from nine[2] to three and become less matters of chance, there will be some room for calm clinical study, for self-training, for learning something during studentship of that very important and terribly neglected better half of the training of a true medical man, the knowledge and observation of a human being, that which was expressed in the wise saying of Andrew Clark, "I first attended to the man and then to the malady."

Could Brodie, or Green, or Lawrence, or Graves, or Stokes look down upon the work of this Council they would be amazed to witness how far we have departed from *their* ideals of the training of a medical man.

# The Erasmus Wilson Lectures

ON

# THE GENERAL PATHOLOGY OF BONE.

*Delivered before the Royal College of Surgeons of England on March 16th, 18th, and 20th, 1896,*

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## LECTURE II.[1]

*Delivered on March 18th.*

### THE EFFECT OF ALTERATIONS IN THE CIRCULATION OF THE BLOOD THROUGH BONE (*continued*).

*D. Venous congestion causes excessive bone formation.*—Venous congestion is set up in bone apart from inflammation or as a result of chronic inflammation, the latter being of course by far the commoner cause. Simple venous congestion not due to chronic inflammation produces the clubbed fingers seen in cases of pulmonary and cardiac disease. A venous nævus in contact with bone may cause a raised patch. Indeed, it has been proposed to promote the formation of bone by artificially setting up venous congestion in a limb by means of elastic bands. This treatment has been used in tuberculous disease of the knee-joint. But it is through chronic inflammation that venous congestion is chiefly brought about—that is, by blood which stays a longer time in the capillaries than normal. There are two results of chronic inflammation which favour venous congestion. In the first place, the unstriped muscle on the wall

[2] Vide Report of the Conjoint Board for England in 1895.

[1] Lecture I. was published in THE LANCET of May 30th, 1896.

of the arterioles is replaced by inflammatory fibrous tissue, and therefore the constricting tonus of the vasomotor nerves can no longer act, and so the dilating influence of the blood pressure is unopposed. Again, as fibrous tissue forms around the vessels and gradually contracts it will press with greater effect upon the thin-walled veins than upon the thicker-walled arteries. Thus, as a result of chronic inflammation we have a tendency to dilatation on the part of the arterioles and to constriction of the smaller veins—venous congestion or a delay in the flow of the blood through the capillaries is the result. Venous congestion in soft parts, arising from chronic inflammation, is often seen to produce overgrowth in the leg, liver, lung, &c. The venous congestion such as causes overgrowth of the soft parts of the leg likewise extends its influence to the bone beneath and excites periosteal bone formation beneath the varicose ulcer. A syphilitic node forms in the same way. It is sometimes proper to cut through the periosteum to relieve pain, and the surgeon has then the opportunity of observing the venous congestion. But much greater formation of bone may be caused when a sequestrum, primarily due to an acute inflammation, remains for a long time and keeps up chronic inflammation. A bone containing a sequestrum may become of great size and the marrow cavity almost or quite obliterated. The enlarged bone contains an unusual amount of compact bone, which may approach to the density of ivory, whilst in it are spaces containing during life venous blood. The surgeon in operating upon such a bone can himself confirm the existence of venous congestion by the dark blood coming freely from the bone, and can compare this with the arterial blood from a bone acutely inflamed. In some the sequestrum is found enclosed in a cavity, in others only the cavity remains, the sequestrum having been absorbed. It is important to take note of any cavity, even although it be empty, when inquiring as to the origin of the cases known as osteitis deformans of a single bone. Being able to form some idea as to the origin of the condition in a single bone, we can pass on to the examination of cases in which more than one bone is affected, and so by an ascending scale of complexity reach the typical cases described by Sir James Paget. The conclusion we shall thus be led up to is that the typical cases are likewise the result of venous congestion.[2] A further complication still—viz., the connexion of osteitis deformans with new growth—will be afterwards dealt with. The production of new bone is, moreover, brought about by the chronic irritation of known chemical substances: nodes occur in chronic lead poisoning; the long-continued administration of phosphorus to animals promotes osteo-sclerosis and thickening of bone; turpentine and chloride of zinc have been successfully employed for the purpose of bone formation. Bony ankylosis of joints, especially where much new bone is formed, is largely due to the venous congestion brought about by chronic inflammation. A very marked as well as common instance is seen in the coral-like outgrowths about the joints of the phalanges in the horse. In man chronic septic conditions—"chronic pyæmia"—may cause ankylosis of many joints with large masses of new bone.

### NERVE INFLUENCE ON BONE.

*Trophic influence.*—A direct control over the structure and nutrition of bone by the nervous system—in other words, a trophic influence—is not yet proved. Supposing, however, such a trophic influence to exist, alterations in structure and nutrition would follow a disturbance or loss of the connexion between the nervous system and the bone. This influence might originate within the nervous system and be connected with the bone by an efferent nerve or it might be a reflex action depending upon an afferent connexion as well as upon the centre and the efferent nerve. An efferent trophic influence is evidently cut off from muscle and atrophy of the bone follows when a motor nerve is divided. In infantile paralysis the degeneration of the muscles and atrophy of bone are the consequences of disease affecting cells in the spinal cord from which the motor nerves arise. In hemiplegia there is no special degeneration of the muscles, but only wasting from disuse. Now atrophy of the bones takes place under both the foregoing conditions, and, moreover, when a joint such as the knee becomes fixed in such a position that the muscles cannot act, wasting of muscles and atrophy of the bones likewise take place, although in this last case the nervous system and nerves are intact. Atrophy from disuse and consequently diminution in the blood-supply suffices, therefore, to explain the changes in bone without the need of supposing a loss of an efferent trophic influence. To the occurrence of afferent impulses which have, by reflex action through the central nervous system, a trophic influence on bone, Charcot and his followers have given support by ascribing to a loss of them the changes which take place in the bones of patients suffering from locomotor ataxia. Facial hemiatrophy with morphœa affects the skin of the face in the distribution of the fifth nerve and is accompanied by wasting of the bones of the face. It has been argued against the trophic view that locomotor ataxia is essentially a wasting disease, as the alternative name tabes dorsalis implies, that the changes in the shafts and ends of the bones do not differ essentially from those occurring in arthritis deformans or osteo-arthritis, and also that they closely resemble changes following on gout, lead poisoning, hæmophilia, leprosy, and senile decay. When a number of bones taken from ataxic patients are compared with those affected by osteo-arthritis the only distinction found has been a greater tendency to absorption and less tendency to new formation of bone in the ataxic patients. But, as is well known, whilst great absorption of the ends of the bone is perhaps the most frequent, large masses of new bone may be thrown out in some cases of tabes so as to completely ankylose the joint. The shafts of the long bones are likewise affected by absorption; indeed, so much may take place as to give rise to spontaneous fracture, and some have been called cases of mollities ossium. On the other hand, an increase of compact bone and a filling of the medullary canal have been met with, and after a spontaneous fracture in an ataxic patient much callus may be thrown out. Spontaneous fractures occur in epileptics, likewise in glioma (or syringomelia) of the spinal cord, in both cases following an atrophy of the bone. Therefore, if there be a nervous trophic influence, the afferent connexions of which are disturbed in ataxia and similar conditions, the result appears in an irregularity of bone formation, either a deficiency or an excess—in fact, a trophic ataxia. Other considerations support the view that there is a general regulation of the structure of bone by means of the central nervous system.

*Transformation of bone.*—From a study of the skeleton in various mammals it can be clearly seen that the architecture of each bone, and, indeed, of the elementary parts of each bone, has been made subservient to function. Each bone has been modelled, both as regards its form and its internal structure, in correspondence with the particular wants of the individual. If the femur of a man be compared with that of an anthropoid ape differences are found on account of man's erect position and peculiar movements of the femur in walking and running. When the adult femur is put alongside that of an infant it is seen that small changes have taken place during growth coördinating structure with developing functions (Mikulicz). The two functions which influence the structure and form of bone are the one statical—i.e., the line along which pressure is exercised—and the other mechanical, affecting the parts of the bone pulled on by muscle and ligament and the direction in which they pull. The internal structure of the upper end of the femur is well known, the arrangement of the septa and trabeculæ form arches and buttresses on a plan evidently directed towards sustaining the weight of the skeleton. The pull of muscles is not only occasional and intermittent, induced by the exercise of the will, but there is also a constant involuntary tension kept up upon the bones by the normal tonus of muscle, each muscle being taut between its two points of attachment. Ligaments are likewise tense (Von Recklinghausen, Wolff). If the bones be active agents, the lines of transmission of force and the direction of the pull of muscles must be attended by special tissue changes in the parts of the bone involved. And such changes postulate a sufficient blood-supply. Conversely, the part of an adult bone which receives the most blood possesses the wherewithal for change not only under normal conditions, but also when abnormal ones supervene. Hence the liability of an adult bone to more frequent pathological changes in one part rather than another may often be explained by reference to its statical or mechanical functions. When the statical conditions under which a bone acts become altered its whole internal structure may undergo a transformation. When after a fracture union in a more or less oblique position has followed, then the axis

[2] A typical case of Osteitis Deformans under the care of my colleague Dr. de Havilland Hall in the Westminster Hospital was recently shown at the Medical Society. The superficial venous congestion over the enlarged bones was very well marked.

of such a bone as the femur becomes altered, so that the lines by which force is transmitted, the way in which each one of the septa has to bear its share of the weight of the body transmitted through it, is changed. After an oblique union of the femur the septa are found to have a different direction from that existing in a normal bone. They accord with the new direction which the lines of force supporting the weight of body now take in consequence of the oblique union. Following therefore on a fracture there are two processes which go on in a bone, the formation of callus at the site of the fracture and the transformation in the direction of the septa, and this in both the distal and proximal fragment. Indeed, arches for strengthening union may stretch across the callus so as to unite the septa of one fragment to those of the other. Whilst the callus is inflammatory in origin and shows no sign of being under any nervous influence, the transformation of structure following on the altered axis of the limb must be determined by a controlling nervous influence, which coördinates and adapts the changes to special ends. A fracture is not necessary in order that this transformation may occur, the same result follows the bending of the bone from rickets. If a rickety bone be split down the middle the filling of the marrow cavity at the bend, the buttresses formed in the concavity of the curve, and the direction of the septa will be found to accord with the altered statical conditions brought about by the curvature. So, also, in the bones of the arm there occurs a transformation of the internal structure in consequence of oblique union or of rickety curvature in accordance with the change in the direction in which the muscles pull. A more striking instance still, because it involves a coördinating influence extending over many bones, occurs as a consequence of spinal curvature. In specimens of lateral curvature we find a thick buttress of compact bone on the side of the bodies of the vertebræ in the concavity of the curvature. This new bone is similar in character with that forming in the bent bones of the lower limbs, many bones being involved instead of one. In cases of angular curvature the thickening is on the anterior aspect. In kyphosis a marked formation of bone takes place at the site of the anterior common and articular ligaments, as well as ossification of the ligaments between the laminæ and between the spinous processes. These are all instances of a coördinate strengthening of a spine weakened by curvature—an adaptation of structure to altered functions. Besides the foregoing evidence concerning nervous regulation of the structure of bone, the skull, the orbit, and the lower jaw may be considered as bones which have been modelled for the brain, eyes, and teeth, which they respectively shelter. Following the shrinkage of the brain on the removal of an eye or tooth we may have changes in the bone which appear likewise to afford instances of the regulatory influence of the nervous system.

### CHANGES IN BONE DUE TO AN IMPAIRMENT OF GENERAL NUTRITION.

*The mineral salts of bone.*—Analyses of the amount of the mineral salts of bone present some discrepancies owing to difficulties (1) in getting rid of all water without destroying the animal substance, and (2) on account of the varying amount of marrow. If dentine were to be taken as the type of dry, fat-free bone, the amount of mineral matters would be found to approach 75 per cent., whereas the usual statement is that the mineral salts form two-thirds of the bone by weight. They are chiefly composed of lime and phosphates. The amount of lime in bone increases up to puberty, as the following figures show.

In a fœtus of from six to seven months there were 59·5 per cent. of the fat-free ash; in a child two years old 65·3 per cent.; and in a child five years old 67·8 per cent. (Voit).

A young pigeon's femur contained 53 per cent. of lime, and an old pigeon's femur had 58·9 per cent. of lime in the fat-free ash.

A rabbit at birth had 53 per cent. of lime in the fat-free ash, one at one month had 58·9 per cent., one at three months had 67·7 per cent., and one full-grown had 74 per cent.

During the growing period of life there is at least, therefore, a small intake of lime for the bones. After puberty it is otherwise. Nelaton and Sappey compared the composition of the same lumbar vertebra at each period of life. They found but little variation throughout except a slight increase of organic material in old age due to senile atrophy.

*Modes of taking in lime.*—Lime may possibly be taken in as a hydrate, carbonate, and phosphate. Since part of the phosphoric acid can be formed in the body from the phosphorus in the albumin of animals or plants taken in as food lime will be required to combine with it. Milk is the great source of both lime and phosphates for young animals, the mother usually suckling her young until more than half of the bone has formed. A litre of cow's milk contains 1·7 grammes of lime, whereas a saturated solution of lime water has only 1·3 grammes per litre (Bunge). Milk has, therefore, the advantage of lime water even as regards lime, to say nothing of its other constituents. The ash of milk is practically identical with the ash obtained by the combustion of a suckling animal, as is to be seen in the following table.

| — | Ash of dog's milk. | Ash of suckling rabbit. | Ash of puppy. | Ash of kitten. |
|---|---|---|---|---|
| | Per cent. | Per cent. | Per cent. | Per cent. |
| Lime ... ... ... ... ... ... | 34·4 | 35·0 | 35·8 | 34·1 |
| Phosphoric acid ... ... ... | 39·5 | 41·9 | 39·8 | 40·2 |

No other food is such a source of lime as milk. Leguminous plants contain only one-tenth, the yolk of egg one-fifth, and bread and meat one-twentieth of the amount of lime contained in milk. But there is some evidence to show that the lime and phosphates may be absorbed in their ordinary inorganic state. If young rabbits be fed solely on oats, which are very deficient in lime, rickets is produced. When, however, chalk is added to the oats the rabbits thrive and remain free from rickets (Weiske). Experiments of this kind have been held to show that rickets may be produced by deficiency in the supply of lime salts and that an absorption of chalk can take place from the intestines. Such absorption certainly takes place in birds, who habitually seek calcareous material to form the shells of their eggs, and who lay soft eggs when deprived of lime. It is, moreover, said that young pigs confined in a stye and fed on meal, or young cattle fed solely on hay or dry pasture, may be kept from rickets or fragility of bone by the mixture of chalk or slaked lime with their food. Perhaps, also, lime can be absorbed from spring water. Calcium is the essential base. It cannot be replaced by barium, strontium, or by magnesuim.

*The excretion of lime and phosphate.*—By far the greater part leaves by the fæces and only a comparatively small amount by the urine—it is said only 0·25 gramme of lime per diem. Of course, the absolute amount of mineral salts in the fæces will largely depend upon the amount in the food. But it can be also proved that the intestines actually excrete lime and phosphoric acid, for these substances are found in the fæces of a starving animal. A recognition of these facts makes clear that conclusions drawn from the analysis of the urine as to the escape of lime and phosphoric acid are entirely untrustworthy, not only because the major part of the mineral matter of the food always leaves by the fæces, but on account of the excretory power of the intestines. That an excess of salts should appear in the urine during the earlier stages of a rapidly progressing mollities ossium is very likely, although the same need not be the case during the later stages of the disease. But the formation of concretions in the urinary tract is no evidence of excessive excretion, but merely of precipitation owing to the alkalinity of the urine. The urine naturally tends to become alkaline when an osteomalacic patient has to take to her bed and when the deformity of the pelvis makes micturition difficult. It is impossible, therefore, to form any conclusions concerning the escape of the lime salts until the difficult analyses of the fæces shall have been more largely resorted to.

*Imperfect ossification and rickets.*—There seems no sufficient ground for supposing an absolute want of lime salts in the diet of a child. Any diet, however inadequate from other points of view, would contain enough of these salts. The mineral salts may not be absorbed; it has been thought that intestinal catarrh may prevent absorption. Intestinal catarrh, however, is no necessary accompaniment of rickets, and even when it exists we have no proof that an absorption of mineral salts is prevented. On the other hand, we have proof that it prevents the absorption of fat, which may be found in the fæces when there is intestinal disturbance.

*TO ILLUSTRATE MR. MALCOLM MORRIS'S ARTICLE ON ACTINOMYCOSIS INVOLVING THE SKIN, AND ITS TREATMENT BY IODIDE OF POTASSIUM.*

Indeed, there is more evidence to show that rickets occurs from want of fat than from want of mineral salts. Rickety children are generally found to have had too little fat in their food, whilst, conversely, children fed on plenty of milk, bacon, &c., remain free. Moreover, the administration of fat in the form of cod-liver oil is a most satisfactory kind of treatment. Fat, added to lean horseflesh, has prevented rickets in young carnivora, and oilcake given to ewes on a poor farm may stop the otherwise inevitable production of rickety lambs. Rickets is thus seen to be essentially due to an impairment of general nutrition, cold, damp, and deficient ventilation sharing also in the causation of the disease as instanced in the case of puppies kept in damp cellars. But, further, it is important that the animal should be fed on its proper food, and therefore an *a priori* objection may be raised to many of the experiments made on animals. The very fact of giving an abnormal diet or of withdrawing some customary article may itself disturb the general nutrition and lead to rickets. Monkeys and other tropical animals kept under artificial conditions in this country show a tendency to rickets, a disease from which they do not suffer in their wild state. Indeed, anything which impairs general nutrition, such as the delicacy of constitution produced by interbreeding, especially in dogs, tends to originate rickets. Hence also it frequently complicates the wasting diseases of children, such as syphilis. The rarity of rickets among the poor in climates warmer than our own may be due not only to the cheapness and plenty of vegetable foods, such as maize, which contains fat, as well as the more general use of milk amongst the poor, but also that not so much of the fat is required for consumption in order to maintain the heat of the body. An impairment of general nutrition, rather than the absence of any special articles from the diet, serves therefore as the best explanation of rickets. The bone-forming cells being at the time particularly active are amongst the first to suffer. In order to form bone these cells have to extract from the blood the phosphate and lime they require just as do other secretory cells—e.g., those of the mammary gland. The ash of dog's blood contains only 0·9 per cent. of lime and 13·3 per cent. of phosphates, and the ash of dog's serum 2·1 per cent. of lime and 5·9 per cent. of phosphates. Ossification clearly demands some energetic action on the part of the cell in gathering out from the blood and secreting these salts which exist in such small quantities in it. A supply of phosphorus in some form must be constantly necessary for that element is an essential characteristic of nucleo-albumin, and it is upon its nucleus that the activity of a cell depends. The causes of the various forms of late rickets are similar in principle to those giving rise to the earlier variety, such as want of food, a lack of fat in the diet, cold, damp, bad air, and exhausting diseases. Girls suffer the most, perhaps owing to menstruation and anæmia. One girl was dying from phthisis and another from exophthalmic goitre when the bones were attacked. Special cases in boys about puberty have been attributed to bad habits (Lucas). But there are two other phenomena met with in some cases of rickets which are not due to delayed ossification. There may be rapid absorption of bone or, on the other hand, an excessive bone formation.

*Bone absorption in rickets.*—Rapid absorption of bone in consequence of an increased supply of arterial blood happens in severe cases of rickets. There may be external signs of inflammation—viz., redness, heat, pain, and excessive sweating—and this not only in the neighbourhood of the epiphyses, but also in such flat bones as the skull. The ends of the long bones become of a much more cancellous structure, whilst the skull may be rendered as thin as paper, or at least much more porous than normal. The older the patient the more striking is the fact. After a child has long learnt to walk it may be attacked by rickets, and bending may still occur. But as the cases become older and approach puberty multiple fractures happen instead or take place along with the curving.

*Bone formation in rickets.*—On the other hand, in the later stages of rickets or where the disease progresses but slowly an excessive formation of bone takes place. This may be seen as a great thickening of the skull and as osteo-sclerosis in the long bones. I have already brought forward the fact that excessive formation of bone is due to venous congestion, whether arising from chronic inflammation or not. This excessive formation of bone takes place both in men and animals. The shafts of the long bones undergo marked osteo-sclerosis—they become heavy and very hard. The skull may be thickened by porous bone (Briscoe), but even still more marked thickenings of the skull are seen in animals. In monkeys and lions dying in the Zoological Gardens Sutton has described such extreme thickenings of the skull as to cause death by pressure on the central nervous system. It will be noted that these tropical animals are liable in this country to both early and late rickets, although they remain free in their wild state. I have already noted a parallel instance in man—viz., the absence of rickets from India as compared with this country.

*Senile changes.*—In all the changes of bone taking place in the decline of life we must recognise as one of the factors the gradual failure of general nutrition. It may be an important factor in some cases, in others only one among others. With diminished muscular use will come a diminished vascular supply, and so a smaller formation of bone in the parts of the bone pulled on by muscles. This may be combined with small disturbances of the regulating control of the nervous system without any nervous disease.

## ACTINOMYCOSIS INVOLVING THE SKIN, AND ITS TREATMENT BY IODIDE OF POTASSIUM.

[WITH COLOURED ILLUSTRATION.]

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ALTHOUGH actinomycosis in the human subject is probably not so rare as till lately it has been supposed to be, it is still met with, or at any rate recognised, infrequently enough to make it worth while to report cases in which there has been an opportunity of studying its evolution and clinical manifestations and the effect of treatment. The following case which I have recently had under observation appears to me to be important as an illustration of the therapeutic action of iodide of potassium in this disease, more especially as the efficacy of this remedy in actinomycosis seems as yet to be imperfectly appreciated in this country. For the notes of the case I am indebted to my clinical assistant, Mr. J. W. Skevington.

A single woman aged fifty-nine years came under my care at St. Mary's Hospital on Nov. 18th, 1895, with a large swelling over the lower jaw on the left side. About Oct. 10th she first noticed a small nodule behind the ramus; it was just underneath the skin, and in about seven days began to discharge. It was very painful and continued to increase until she came to the hospital. The patient had for the greater part of her life been in service as a housemaid, but for about a year before the beginning of her illness she had made her living as a needlewoman. She stated that she had never lived over a stable, and had nothing to do with horses, cows, or other animals, nor with grain, hay, or straw. There was no history of a blow or other injury and she could throw no light on the origin of the disease. Her record of previous illnesses showed nothing that could be interpreted as having any bearing on her condition, nor was there anything of significance in her family history. She had a large dark red nodular tumour with a sharply circumscribed edge on the left side of the face. It extended from the angle of the lower jaw forwards to the corner of the mouth, upwards to the zygomatic arch, and downwards over the sterno-mastoid for about two inches. Here and there on the surface there were small scars, and the skin, especially at the lower part in the neck and about the corner of the mouth, was drawn into folds by cicatricial contraction, giving the swelling a puckered appearance about the edges. On the most prominent part, in the temporo-maxillary region, the surface of the mass was irregularly raised into nodules varying in size from a split pea to a small bean, each having a small opening at the top, the position of which was marked by a yellow bead of pus. On squeezing the nodules a little sero-purulent matter escaped. In this discharge were found firm yellowish-grey granules which microscopic examination showed to be masses of actinomyces or ray fungus. The skin over the whole mass was brawny and reddened. To the touch the swelling at first gave the impression of cartilaginous hardness, but on firm pressure between the fingers it was felt to be elastic. There was no

fluctuation. Narrow spurs of infiltration also extended upwards behind the lobe of the ear and backwards to the posterior border of the sterno-mastoid. A hard lump of the size of a large hazel nut could be felt under the buccal mucous membrane. The structures forming the cheek were infiltrated and firmly fixed to the jaw, especially towards the angle, but the bone itself was not implicated. There were no teeth in either jaw except the left superior external incisor and canine. No enlargement of glands, either concatenate or supra-clavicular, could be felt on the left side of the neck, and there was no evidence of secondary growths. There was no trismus, but the patient complained of great pain, particularly on mastication, and the nodules were tender on pressure. She had a poor appetite and slept badly, but otherwise there was no disorder of the general health. How the infection was conveyed in this case there is no evidence to show, but of the nature of the disease there was no doubt. The microscopic examination was conclusive; apart from this, however, the situation and appearances of the swelling (see coloured plate) were characteristic. The internal administration of iodide of potassium was begun on Nov. 21st, when the following mixture was ordered to be taken three times a day: Potassii iodidi 15 gr., spiritus ammoniæ aromatici 20 minims, decoct. cinchonæ ad ℥i. For the first three days after the commencement of treatment the pain was worse and the discharge was profuse, but after that the good effect was soon manifest. The pain abated, the swelling became paler and softer and began to shrink. After ten days of the treatment only slight traces of the fungus could be discovered in the discharge, which was very scanty. The patient was exhibited to the Dermatological Society of London on Dec. 11th, and at that time the growth had diminished to half its former size, and was much softer in consistence while the pain was very slight. On the 16th the dose of iodide of potassium was increased to 20 gr. and on Jan. 27th, 1896, to 30 gr. three times a day. The improvement continued, and, in short, the history of the case from the time the patient was brought under the influence of the iodide was a record of uninterrupted progress towards cure. Together with the retrocession of the local process appetite and sleep returned and the woman felt better than she had done for a considerable time. At the beginning of February the swelling had nearly disappeared, the sinuses had healed up, and only a trace of the disease was left. When last seen (May 28th) the patient was well, but was still taking the iodide.

There can be no doubt that actinomycosis has often been mistaken for gumma or other manifestation of syphilis, and the erroneous diagnosis must have appeared to receive confirmation from the beneficial effects of iodide of potassium. In other cases the disease has been looked upon as tuberculous or has been taken to be a malignant growth—generally sarcoma, to which, indeed, it sometimes bears a close resemblance. It is generally easy enough to recognise actinomycosis when one is alive to the possibility of meeting with it in a given case; but the appearances are certainly very puzzling when such a contingency does not happen to be present to the mind. As actinomycosis, even when liberal allowance is made for errors in diagnosis, is not a common disease, and as there must be many members of the profession in this country who have never seen a case, it may not be amiss to give a short account of it in its ordinary manifestations. I have no pretension to be able to add anything to what is already known about the disease, but I have lately had occasion to look through the recent literature bearing on the subject, and as even the most modern English text-books and special treatises give only a few lines to the description of the disease so far as it attacks the skin, I may, perhaps, be excused for trying in some measure to fill the gap at least provisionally.

Actinomycosis is a parasitic disease, the lesions being the result of a reactive process caused by the presence in the tissues of a living irritant, the actinomyces or ray fungus. This was first described as it occurs in the so-called osteo-sarcoma of animals by Rivolta in 1868 and more fully and more accurately by Harz and Bollinger[1] in 1877. It was Harz who gave the disease caused by the parasite the name of "actinomycosis." In man it was first definitely recognised by J. Israel.[2] The parasite had been seen and drawn by von Langenbeck[3] in 1845, but its nature was not understood by that great surgeon. Three cases were described in 1853 by Robin and Laboulbène[4] which appear to have been instances of actinomycosis, and four years later the characteristic granules were noticed in pus from an abscess of the chest wall by Lebert,[5] who, however, was unable to give an opinion as to their nature. The parasite had also been drawn independently by Mr. T. Smith[6] when examining the tissues of an obscure case for Sir James Paget about 1855. In 1879 Ponfick proved that the disease as it occurs in man is pathologically identical with that met with in animals.

Actinomycosis may attack almost any part of the body; but there are three principal points of invasion, the neck, the chest, and the abdomen. The cervico-facial region is the most frequent site of the disease; it has been estimated that some 55 per cent. of all cases have this localisation, but the proportion is probably higher than this; thus of thirty-eight cases published in France up to the latter part of 1895 the disease was in this region in thirty-five. The lung and abdominal viscera come next. The limbs suffer comparatively seldom. Cases are, however, recorded in which the disease attacked the hand by Bertha[7] and Müller[8] and the lower limbs by Marten,[9] and Pringle.[10] Crookshank and Kanthack[11] maintain that one variety of the affection of the foot familiar to Indian practitioners under the name of "madura foot" or mycetoma is in reality a form of actinomycosis caused by a variety of the ray fungus, but this theory must be considered as yet "not proven." The points of difference between the fungus of actinomycosis and that of mycetoma have been fully described by Surreyor and Boyce.[12] The skin is extremely seldom primarily attacked by actinomycosis, but it is very often secondarily invaded by extension of the process from the underlying tissues.

In this paper I am chiefly concerned with actinomycosis as it affects the skin, and in the following description I will take the temporo-maxillary form of the affection as the type. The most common situation of the disease is the space roughly limited behind by the ramus of the jaw, below by the body of that bone, and above by a line from the temporo-maxillary joint along the zygoma. This localisation is doubtless due to the fact that the fungus as a rule finds its way into the tissues through the mouth, the point of entrance being a carious tooth or an erosion of the mucous membrane. Bertha[12a] reports two cases of direct inoculation of the skin of the hand by means of grain. Sometimes it gains access through a breach of the skin surface caused by injury; what appears to be an instance of this mode of invasion has lately been reported by Guillemot.[14] A man was struck on the face by a piece of wood and a few weeks later an actinomycotic swelling developed on the exact site of the blow. Müller[15] has recorded a case in which a woman ran a splinter of wood into her finger and two years later a swelling formed in the same situation which was proved by microscopic examination to be of actinomycotic nature; the chip of wood was found imbedded in the diseased tissues. Although there are no precise data by which to estimate the period of latency I find it difficult to believe that it can be as long as two years; it appears more probable that inoculation took place through the wound. In animals the fungus is mostly conveyed into the body by the food, and in man the fungus is no doubt sometimes introduced by tiny pieces of grass, hay, corn, &c., which are chewed or unwittingly swallowed. The most common habitat of the fungus is the surface of certain vegetable substances, especially grass and cereals, particularly in the dry state. A piece of straw may be at once the means of conveying the fungus into the mouth and the instrument of inoculating it in the tissues by making a tiny scratch on the mucous membrane. Thus Poncet[16] reports a case in a woman who was accustomed to carry in her mouth wisps of straw for

[1] Centralblatt für die Medicinischen Wissenschaften, No. 27, 1877.
[2] Virchow's Archiv, Band lxxiv., 1878.
[3] Ibid.
[4] Besse: De l'Actinomycose Cervico-faciale, Lyons, 1895, p. 69.
[5] Ibid.
[6] A. A. Kanthack: St. Bartholomew's Hospital Journal, January, 1896.
[7] Wiener Medicinische Wochenschrift, 1888, No. 35.
[8] Bruns: Beiträge zur Klinischen Chirurgie, Band iii., Heft 3, p. 355.
[9] THE LANCET, Jan. 12th, 1895.
[10] Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii., 1895.
[11] Journal of Pathology and Bacteriology, vol. i., 1892. Vandyke Carter suggested in 1886 that some forms of mycetoma are produced by a fungus akin to actinomyces.
[12] Proceedings of the Royal Society of London, 1893.
[13] Loc. cit.
[14] Lyon Médical, Jan. 26th, 1896.
[15] Loc. cit.
[16] Gazette Hebdomadaire, April, 1895.

tying up vines; and another[17] in a man who had a habit of chewing bits of grass and straw; Dubreuilh and Frèche[18] report a case in a man who used to pick his teeth with straw, with which he sometimes made his gums bleed; Monestié[19] relates one in a girl who was in the habit of chewing straw; and Besse[20] one in a man who was accustomed to chew grain. Guermonprez and Augier[21] have recorded a case in which a man wounded his gum with a piece of cornstalk; eight days later a hard, painless swelling, which proved to be of actinomycotic nature, appeared in the exact situation of the scratch. There is some evidence that the actinomyces may be introduced into the system in meat from animals that have suffered from the disease, in vegetable substances such as cereals, potatoes, &c., and even in milk.[22] The disease may also be transmitted directly from animals to human beings or from the latter to each other. Baracz[23] has placed on record a case in which it was communicated by a man to a woman by kissing, and cases in which it has been transmitted from animals to human beings have been reported by Poncet, Mayde, Bulhoes-Hartman, and others.[24]

As regards the etiology there is little more to be said; neither age nor sex can be regarded as a factor except in as far as they have any connexion with occupations exposing to the risk of infection. That the soil has an influence, favourable or unfavourable, on the growth of the parasite in the tissues is obvious, not only from the very different degrees of severity of the disease, but from the very marked differences of type in which we meet with it clinically. Of the causes of these differences, however, we know nothing. The published literature might suggest that the disease is far more frequent in some parts of Germany and particularly in Austria than elsewhere, but this is probably in large measure due to its being more carefully looked for in those countries. It is significant that whereas France used to be thought to be exempt from actinomycosis, no fewer than twenty-four cases have been recorded in that country since 1894; it is still more significant that of that number twelve have occurred in Lyons, nine of them in the practice of one surgeon, M. Poncet.[25] It appears a fair inference, therefore, that actinomycosis will be recognised more frequently the more carefully it is looked for. In many cases, as in the one reported above, the mode of infection cannot be precisely determined. According to M. Arloing,[26] the spores are scattered about in nature in considerable abundance, being generally present in greater or less numbers on organic substances in course of becoming mouldy. These spores may penetrate by inoculation into the tissues and they may also gain entrance through the respiratory passages, spreading thence into various parts of the organism by the bloodvessels. As the mycelial tubes have no distinct sheath such as is found in ordinary moulds, they are easily broken up and may be scattered about to great distances. I give these facts on the authority of M. Arloing, a man not given to uttering base scientific coin; the wonder, therefore, is not that actinomycosis should often develop without traceable cause, but that it is not a much more common disease than it is.

The fungus having found its way into the economy after a period of incubation not less than four weeks sets up an inflammatory process, the exact course and results of which are dependent on the nature of the tissues in which it is embedded. The essence of the process is that a development of granulation tissue takes place round the fungus; a nodule is thus formed, the interior of which soon breaks down into a thin liquid containing tiny granular bodies. By-and-bye the neighbouring nodules coalesce into a tumour-like mass, hard and solid at first, but before long suppurating in different places and giving rise to small abscesses, which may run together and form cavities of considerable size. The skin covering the swelling is at first red and brawny; as tension increases it becomes livid and soft and finally gives way, generally in several places. Through the openings there escapes a thin serous or serо-purulent discharge, containing yellowish grey or whitish granules, which to the finger feel firm and resistant; these are masses of spores of the ray fungus. The openings of the sinuses closely resemble those leading to diseased bone, but on probing no bare bone is struck. The sinuses have soft, fungating walls and are often partly filled with broken-down tissue; they communicate with cavities lined with similar material in which the characteristic yellowish granules are present in greater or less abundance. For a considerable time the process is confined to the soft tissues, especially to the subcutaneous cellular tissue, muscles, &c. The periosteum may also be thickened, but the bones are very seldom attacked, and then only secondarily. In some rare cases, however, the process invades the bones almost from the first; thus Poncet[27] has recorded a case in which the bones of the upper jaw and the corresponding half of the hard palate were completely destroyed in five months, the soft parts of the cheek remaining unaffected. It is a curious fact, of which I have seen no explanation, that in animals the bone is always invaded, and, in fact, is generally the starting-point of the process, whereas in man the general exemption of the bone is one of the characteristic features of the disease. On the other hand, suppuration, which is the rule in the human subject, never occurs in animals. The suppuration caused by the actinomyces itself in man is of a peculiar character, the pus formation being extremely scanty and the pus itself generally thin, though very sticky. As the process continues, however, pus-cocci gain access and set up active suppuration, the ravages of which extend wide and deep, destroying the temporal, masseter, and pterygoid muscles and not sparing the bone. In this stage the characteristic features of the disease are lost in a mass of inflamed and disintegrating tissues, fungating here and there through the skin, which is riddled with sinuses and fistulæ intercommunicating with each other in an inextricable labyrinth.

The appearances of actinomycosis as it affects the skin in other parts of the body have been well described by Pringle[28] in the case of a boy under his care in the Middlesex Hospital in whom the primary seat of disease appears to have been the respiratory tract. The skin lesions were situated on the back. "The most striking feature of the eruption is constituted by enormous livid, fleshy, sarcomatous-looking outgrowths of mottled purplish and yellow colour. ..... All the growths feel pulpy and fluctuating and are not tender; each growth presents at least one, usually several, small crateriform ulcerative openings, from which a clear, rather sticky fluid constantly exudes. ..... In each of these ulcerative surfaces there is an accumulation of purulent fluid of pale sulphur-yellow colour, which is seen to contain innumerable tiny granular specks." Over the part of the chest there were deep brown pigmented sunken cicatrices, the marks of lesions similar to those on the back, which have discharged their contents. Over the great trochanter are three similar pigmented scars, which still show some signs of activity.

Actinomycosis may run an acute course, but as a rule the process is chronic, sometimes with occasional exacerbations. The typical form, that which affects the parts about the angle of the jaw and the temporal region, often begins with pains about the back molar teeth, which may be decayed, or in the temporo-maxillary joint itself, where the pain is sometimes so intense as to suggest arthritis. Another symptom which not infrequently precedes the appearance of swelling is trismus, the closure of the mouth apparently being due to reflex spasm of the masseter and temporal muscles caused by the irritation of the parasite. The trismus is often so severe as to make feeding a matter of great difficulty. The swelling usually first shows itself at the angle of the jaw and spreads upwards along the ramus, infiltrating the temporal region and the cheek and sometimes the part behind the ear. From the slight degree of redness of the skin covering it and from its indefinite outline and nodular surface the swelling is in its appearance at first more suggestive of a new growth than of an abscess. To the finger it feels solid like cartilage or even wood, but yet elastic. As Poncet says, an actinomycotic swelling gives to the touch a sense of something unfamiliar, its consistence being between that of a hard tumour and of inflammatory œdema: the impression given to the finger is, as he expresses it, as if the connective tissue in the affected region had been infiltrated with some coagulating substance. Diffused through the mass of the swelling nodules of varying

[17] Mercredi Médical, June 19th, 1895.
[18] Annales de Dermatologie, September, 1895.
[19] De l'Actinomycose Cutanée. Thèse de Paris, 1895.
[20] De l'Actinomycose Cervico-faciale, Lyons, 1895, p. 67.
[21] Gazette des Hôpitaux, Feb. 11th, 1892.
[22] Besse: loc. cit., p. 37.
[23] Quoted by Besse: loc. cit., p. 37.
[24] Ibid.
[25] Besse: loc. cit., p. 71. According to a more recent communication by Poncet (Bulletin de l'Académie de Médecine, April 14th, 1896), the number of cases recorded in France up to that date was between forty and fifty. Of these, twenty were observed in Lyons.
[26] Lyon Médical, Dec. 22nd, 1895, p. 571.
[27] Gazette Hebdomadaire, April, 1895.
[28] Loc. cit.

size can be felt. On passing the finger into the mouth the swelling can be felt projecting into the cavity; the mucous membrane is sound and the mass can be felt lying outside it, smooth and dense as on the face. Pointing as a rule takes place towards the exterior, not towards the mouth. Waring[29] has, however, recorded a case in which the swelling burst into the buccal cavity. After a variable time slight fluctuation may be perceptible at one or more places, and the skin in those spots becomes livid and thin and finally breaks, giving issue to a little fluid in which are seen the granular masses containing the parasites. Squeezing causes the escape of more yellowish bodies, but not, as a rule, of any amount of pus. Long sinuses are formed from which matter containing the yellowish granules of the fungus is discharged from time to time. When the contents have been completely got rid of the opening heals up, and when there are several such small "extinct volcanoes," if I may call them so, the contraction gives rise to the puckering in the swelling which is one of the most characteristic appearances of the disease. There is seldom any enlargement of neighbouring glands, the fungus being too large to make its way along the lymphatics. When, however, suppuration runs riot and the original disease has become complicated by the invasion of pyogenic microbes the glands may be involved in the general conflagration. Secondary foci of the disease may develop in neighbouring parts, as the neck, the cheek, the temple, &c., the fungus burrowing its way along in the loose connective tissue, under fasciæ and in the sheaths of blood-vessels and muscles. The evolution of these secondary swellings is similar to that of the original mass.

In the ordinary chronic form actinomycosis in the earliest stages, when the lesions are purely local, is not accompanied by any particular derangement of the health, though much suffering may be caused by pain and the patient is weakened by want of sleep and inability to take food; if the process continues his strength is further drained by prolonged suppuration; and if the larynx, œsophagus, lungs, nervous system, &c., be attacked corresponding symptoms will be produced. The disease if left to itself tends to spread both by continuous extension and by metastasis. It may extend downwards in the subcutaneous tissue in the front of the neck or at the side along the sterno-mastoid, reaching the supra-clavicular region or passing into the axilla, and fixing the whole neck from the chin to the sternum in a rigid casing;[30] or passing below the superficial cervical fascia it may spread downwards into the anterior mediastinum, perhaps ulcerating into the air passages on its way, and finally attacking the lungs and the heart; sometimes it extends upwards to the base of the skull, attacking the meninges and the brain, or it invades the spinal cord. In any of these lines of extension the mass may erode the walls of blood-vessels with consequent formation of fresh foci in the viscera. Death may occur from exhaustion, amyloid degeneration of the liver, &c., or septicæmia. In certain rare cases actinomycosis runs an acute course, beginning suddenly with high fever and great swelling of the neck, sometimes spreading to the floor of the mouth, the tongue, and the pharynx; the affection in such cases strikingly resembles angina Ludovici and death may occur in less than a week from the onset.

Fortunately, actinomycosis is fairly amenable to treatment if taken in time, and if properly dealt with the formidable complications that have been alluded to can often be prevented. It must be borne in mind, however, that actinomycosis, particularly in the temporo-maxillary form, is of two very distinct types—one comparatively mild, in which the affection is easily controlled or may come to a standstill or undergo spontaneous cure, and another in which it has in it an element of malignancy which simply defies treatment. There can seldom nowadays be any difficulty about the diagnosis, except in the initial stage, before the skin has given way and allowed the characteristic granular bodies to escape. The yellowish-grey bodies can readily be identified with the naked eye when once they have been seen, but reliance must not be placed on such perfunctory inspection; masses of cholesterin crystals have been taken for actinomyces, and a microscopic examination should be made in all cases. Even with the aid of the microscope the characteristic bodies are not always easy to discover. Microscopically the granular bodies consist of rounded masses of leptothrix filaments surrounded by a fringe of club-shaped bodies radiating from the centre. The morphology and life-history of the parasite will be found fully described in the writings of Pontick,[31] Israel,[32] Crookshank,[33] and Kanthack,[34] to which I refer the reader. Poncet, who has given great attention to the subject, holds that the diagnosis can generally be made from the symptoms alone. The signs on which he lays stress are: (1) the character of the pain, which is not continuous, is mostly worse at night than in the day, is not tensive like that of an abscess, and is often not relieved by incision; (2) the early occurrence of trismus not dependent either on pain—since it is present in cases where there is little or no pain—or on swelling; this symptom according to Poncet is pathognomonic; (3) the situation and peculiar wooden feeling of the swelling; and (4) the respect for the bony structures generally shown by the process. The absence of glandular enlargement is another distinctive feature. Actinomycosis might possibly at the very outset be mistaken for periostitis due to dental caries; in the latter condition, however, the bone is pretty sure to be attacked, in any case the decayed teeth would have to be extracted and the progress of events would speedily clear up the diagnosis. The prognosis may be gathered from what has been said in describing the course of the disease and the different types which it may assume. In general terms it may be stated that the acuter the onset the graver is the outlook; and, on the other hand, the slower the course and the more localised the process the more likely is the disease to yield to treatment. Besse's figures show that in the ordinary cervico-facial form the average mortality is about 8 per cent., but when the upper jaw is the seat of disease the fatality is much greater. Of 16 cases of this description under Poncet 8 died. Jirou gives the following death-rates for the different forms of actinomycosis: of face and neck, 11 per cent.; thoraco-pulmonary, 83 per cent.; abdominal, 71 per cent.; and cerebral, 100 per cent.

Actinomycosis can often, as in the case which forms the basis of this communication, be cured by the internal administration of iodide of potassium alone. It is remarkable that the use of this drug, which is now known to be almost as certain a specific in actinomycosis as it is in tertiary syphilis, should still be unfamiliar to English practitioners. It is not mentioned at all in some recent works on diseases of the skin, including my own, and it is referred to only in the most cursory manner in text-books of surgery published within the last twelve months. It was first used in veterinary medicine by Nocard[35] in 1885, and also by Thomassen[36] of Utrecht. In Chicago, out of 185 oxen suffering from the disease, 71 were cured by iodide of potassium.[37] In the human subject it seems to have been first used by Netter.[38] It was soon afterwards successfully employed by Buzzi and Galli-Vallerio.[39] In Holland instances of cure by means of this remedy have been recorded by Van Itelson of Leyden, Salzer of Utrecht, and others. In France it has been successful in the hands of Meunier,[40] Gaube,[41] Jaboulay,[42] Dubreuilh and Frèche,[43] Legrain,[44] Monestié,[45] and Duguet;[46] and Poncet and his pupils Jirou and Besse bear emphatic testimony to its value. Rydygier[47] of Warsaw also speaks favourably of its use; in Denmark it has been used successfully by Schon;[48] and in America it has been tried with excellent results by Van Arsdale.[49] Milton[50] cured a case in the Kasr-el-Aini Hospital in Egypt, the first recorded in that country, with large doses of iodide. In this country Pringle[51] has obtained very encouraging results in one case with the

[29] THE LANCET, May 25th, 1895.
[30] Choux: Archives Générales de Médecine, April, May, June, 1895.
[31] Actinomycose des Menschen. Berlin, 1882.
[32] Actinomycose des Menschen. Berlin, 1885. See Microparasites in Disease. New Sydenham Society, 1886, p. 463 et. seq.
[33] Transactions of the Royal Medical and Chirurgical Society, 1892.
[34] Loc. cit.
[35] In a communication to the Société Centrale de Médecine Vétérinaire. Quoted by Pringle, loc. cit.
[36] Journal of Comparative Pathology, 1892.
[37] Pringle, loc. cit.
[38] Tribune Médicale, No. 46, 1893.
[39] See Therapeutic Gazette, 1894, p. 35.
[40] Bulletin Médical, July 17th, 1895.
[41] Union Médicale du Nord-Est, March, 1894.
[42] Besse: Loc. cit., p. 67.
[43] Annales de Dermatologie, September, 1895.
[44] Ibid., July, 1895.
[45] Loc. cit.
[46] Bulletin de l'Académie de Médecine, Dec. 31st, 1895.
[47] Wiener Klinische Wochenschrift, November, 1895.
[48] Ugeskrift for Læger, 1895, No. 50.
[49] Annals of Surgery, September, 1895.
[50] THE LANCET, Nov. 11th, 1893.
[51] Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii., 1895.

iodide, although he did not give it in full doses. Iodide of potassium has also been used with success by Ward of Leeds.[52] I have heard privately of a few other cases in which the treatment has been successful in some London hospitals, but they are still unpublished.

The mode of action of the drug in actinomycosis is not yet clearly understood. It does not seem to kill or even injure the parasite. Nocard found that a solution of 1 per cent. of iodide of potassium did not check the growth of cultures in an artificial nutrient medium. Netter believes that the remedy has a specific action on the anatomical elements, increasing their power of resistance and thus strengthening the organism in its struggle against the disease. However this may be there can be no doubt of its influence for good. It causes a rapid subsidence of the tumours and nodosities, the parasites are discharged through the sinuses or are absorbed, and ulcerated surfaces heal. In the case above recorded the therapeutic effect was even more striking than that of the drug in tertiary syphilis. The earlier the administration of the iodide is begun the surer and speedier is its action. In order to get the full effect it must be given in full doses. Beginning with ten or fifteen grains three times a day, it should be steadily pushed to twenty, thirty, forty grains, and even larger doses if necessary. The more active the disease the more energetic must be the medication. As a rule the drug is well borne, but if it comes to be what may be called a struggle for life between the remedy and the disease any inconvenience likely to be caused by the former is preferable to the almost certainly fatal effect of the latter. Poncet usually combines local applications of iodide of potassium with its internal administration. He injects a 1 in 100 solution into the sinuses and fistulæ or inserts pencils of the iodide resembling those often used for the application of iodoform. Others, as Rydygier, combine interstitial injections of a 1 in 100 solution into the mass with internal medication by iodide of potassium. The average duration of treatment by the internal administration of iodide of potassium is from six weeks to two months. Although the drug may almost be considered a specific it must not be accounted infallible. Poncet records three cases under his own care in which the disease went steadily on to a fatal issue, apparently uncontrolled by the remedy. Dr. D. N. Knox[53] has quite recently reported a case in which the drug was equally useless. On the other hand, in estimating the therapeutic efficacy of the iodide it must be borne in mind that there are cases of benign type which have a natural tendency to end in cure. Arsenic has been used alone or combined with iodide of potassium in cases of abdominal actinomycosis (perityphlitis actinomycotica) by Ammendorp[54] and Tscherning,[55] both of Copenhagen. In a case under Darier's care, in which the affection was limited to the soft parts of the face, a cure was effected by electro-chemical treatment applied by Gautier;[56] a solution of iodide of potassium was injected into the diseased tissues, and a current was then passed through so as to decompose the substance and thus utilise the antiseptic power of iodine in its nascent state. Tuberculin was used successfully in one case by Billroth,[57] and Ziegler[58] has had good results with the same remedy. Thyroid extract has been employed by Pringle in two cases; one[59] improved remarkably under the treatment; in the other[60] the remedy did good at first, but had to be discontinued on account of the untoward symptoms caused by it. In many cases the internal medication must be supplemented by surgical measures. Suppurative foci must be laid open and drained; the walls of chronic sinuses and cavities must be curetted and purified and necrosed bone must be removed; ulcers and wounds must be dealt with on ordinary antiseptic principles. It is hardly within my province, however, to go into details on this subject.

A word or two respecting prophylaxis may not be out of place. Arloing recommends that all animals suffering from actinomycosis in however mild a form should be slaughtered. If this measure is considered too drastic at least the meat from such animals should be carefully inspected, and the same precautions should be adopted in the cooking of it as are enjoined by Dr. Woodhead[61] relative to tuberculous meat. Milk from animals with "lumpy jaw" or "wooden tongue" should be boiled before use. A word of caution may be added as to the danger of chewing bits of grass or straw, as many people besides ostlers and Lord Palmerston (see Leech's caricatures of that statesman *passim*) are in the habit of doing. As for picking the teeth or clearing out carious cavities with straw—a procedure I have known to be adopted—it can only be described as flying in the face of Providence.

[52] THE LANCET, Jan. 26th, 1895.
[53] Glasgow Medical Journal, May, 1 9?.
[54] Hospitals-Tidende, Band i., p. 518.
[55] Ibid., p. 520.
[56] Annales de Dermatologie, 1891, p. 449.
[57] Wiener Medicinische Presse, 1891, p. 350.
[58] Münchener Medicinische Wochenschrift, 1892
[59] British Journal of Dermatology, January, 1896.
[60] Transactions of the Royal Medical and Chirurgical Society vol. lxxviii., 1895.


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Harley-street, W.


## THE SYMPTOMS AND TREATMENT OF DISEASES OF THE ATTIC (UPPER PART OF THE MIDDLE EAR).


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BEFORE discussing this important subject it would, perhaps, not be out of place to explain and describe a few of the terms used. The attic—also called recessus epitympanicus, or aditus ad antrum, or Kuppelraum—is the upper part of the middle ear and contains the head of the malleus and the greater part of the incus. The tegmen tympani forms the roof and Shrapnell's membrane and a ridge of bone above it form the outer wall. It is divided into several cavities by the ligaments of the malleus and the incus and by folds of mucous membrane, which connect the ossicles with the walls of the attic. These vary to a considerable extent. Shrapnell's membrane is the upper part of the membrana tympani. It is thinner than the lower part or pars tensa, as it consists only of two layers (integumentary and mucous) and lacks the middle or fibrous layer. The attic plays a very important part in connexion with the diseases of the middle ear and mastoid antrum, partly because of its position, as it is practically the connecting link between these two cavities, and partly because of its contents and the arrangement of the same. Inflammation of the middle ear can very readily spread into the attic, and when it has once got into the various cavities it rarely heals spontaneously. This explains why the ossicles and walls of the attic are so frequently diseased. Often there is an accumulation of thickened exudation or pus, or we may find a genuine cholesteatoma. Wall found caseous matter in the attic in forty-four out of sixty-five cases of perforation of Shrapnell's membrane. My own experience quite agrees with these figures. It is difficult to localise the exact seat of the disease. The position of the perforation, however, helps us

[61] See Report of Royal Commission on Tuberculosis.

to some extent. If it is over the short process of the malleus then the head of the malleus is affected; if behind, the long process of the incus; whereas if the walls of the attic are diseased there is a large perforation in the upper part of Shrapnell's membrane. In all cases of perforation of the lower part of the membrana tympani, in which ordinary treatment (removal of granulations, local applications, &c.) has failed to effect a cure in a few months, we can be nearly sure that the attic is diseased—especially in adults—and perhaps also the mastoid cells. In adults we nearly always find that if the mastoid cells are affected the attic is also diseased. This is of great importance in the surgical treatment of the diseased mastoid process. It is the reason why Schwartz's original operation is frequently so unsuccessful: because we do not lay open and treat the diseased attic. This naturally keeps up the otorrhœa and often causes recurrence of the mastoid disease.

The symptoms of disease of the attic are chiefly objective. We in most cases find perforation of Shrapnell's membrane or of the pars pensa with or without granulations. We can have simple accumulation of pus, or a cholesteatoma, or caries of the ossicles or of the wall of the attic. Frequently granulation tissue projects through the perforation of Shrapnell's membrane and may attain large dimensions. Often we find a small, dark crust which covers the perforation and which is often mistaken for cerumen. These cases are frequently overlooked, and yet it is of great importance that they should be diagnosed, as the crust naturally causes retention of pus. It very readily re-forms when removed. We can have disease of the attic without perforation of the membrana tympani. In my experience these cases are not at all uncommon. The patient complains of pain in or above the ear, of a feeling of fulness, not always of deafness. We find redness and slight bulging of Shrapnell's membrane or of the upper part of the external meatus. Frequently in chronic cases there is swelling above the auricle, extending forwards and backwards, often as far as the apex of the mastoid process, and thus simulating disease of the antrum. I have recently operated on a man aged thirty years who for twenty years has had discharge from the right ear. On three occasions he had Wilde's incision performed for mastoid abscess. I was much surprised to find the mastoid process apparently normal and a large cholesteatoma of the attic.

Pain, of course, is a common symptom and it varies with the nature of the disease. I have seen several cases in which the only symptoms were frequent attacks of dull, aching pain, with slight bulging of Shrapnell's membrane, with no marked deafness. I incised, found caseous matter, and scraped and syringed out with excellent results. Often there are shooting pains which radiate chiefly upwards and forwards. In all cases of mastoid disease with pain above and in front of the ear, especially if there is any swelling there, we should carefully examine the attic. As regards treatment, I think that we should be guided by ordinary surgical principles: enlarge the perforation, excise part of the membrana tympani (if necessary), remove any granulations and caseous matter by the curette and the syringe, and apply chromic acid, iodoform, aristol, &c., taking care, of course, that the perforation be kept well open. If the malleus or incus is diseased and loose they can easily be removed. If they are firmly attached or difficult to find, it is best to wait awhile before attempting to remove them. We then do not incur the great risk of damaging the stapes or the facial or semicircular canals. I use Delstanche's or Hartmann's or Milligan's irrigator for washing out the attic and Delstanche's new curette for removing the malleus. I believe that if these simple methods of treatment were more thoroughly carried out we should not hear so much of the wonderful operations for removing the ossicles under chloroform or of opening up the attic. Out of forty-two private cases of perforation of Shrapnell's membrane I have only twice removed the ossicles under chloroform and opened up the attic in ten cases. In the remaining thirty cases free incision, syringing, and scraping effected a cure. The incus is often dislocated or absent.

If these ordinary methods and the removal of the ossicles fail to effect a cure, or if the external meatus is too narrow to apply local treatment, we must open up and explore the attic. I make a long incision behind and round the top of the ear down to the tragus, cut through the external meatus, and pull the whole of the ear downwards. The wound is dressed from above and allowed to heal from below. There is very little deformity, and a much better view is retained of the diseased parts during the period of healing. If a permanent fistula has to be retained it is for obvious reasons much more desirable that this should be above and not behind the ear. I always remove the outer wall of the attic and the posterior wall of the external meatus with the chisel. Macewen, Barr, and others recommend the use of the burr and dental engine. I have not yet been able to find burrs which bite properly on the hard bone, and the operation thus becomes very tedious. We frequently find a number of mastoid cells on a level with the attic. In all operations these should most carefully be looked for, and if necessary opened up and scraped. If they are overlooked the disease is sure to recur.

The after-treatment is often very tedious. I have generally kept the outside wound open for a month or two, and if necessary allowed a permanent opening to form. In a few recent cases I have adopted the method of incising the external meatus and forming it into a flap or flaps, or of excising part of the meatus. A very large external meatus is thus obtained and the diseased parts can easily be watched through it; apply remedies locally, and thus allow the outside wound to heal up at once. I apply iodoform for a few days after the operation and then use aristol or europhen. Iodoform has a tendency to cause increased growth of granulation tissue, which blocks up the field of operation.

The facts to which I should have liked to draw particular attention are: (1) that localised disease of the attic is very common—more so than is generally supposed—and that it may occur without perforation of the membrana tympani; (2) that in cases of chronic otorrhœa which have for some time resisted the ordinary methods of treatment, and in disease of the mastoid antrum in adults, the attic is nearly always affected; (3) that in all cases of disease of the attic we should adopt ordinary simple surgical treatment before removing the ossicles under chloroform or opening up the attic; (4) that in opening up the attic we should prolong the incision over the top of the auricle downwards to the tragus and treat the wound from above; (5) that in suitable cases the external meatus should be partly excised or incised, and flaps formed and the outer wound allowed to heal up at once; and (6) that we should always remove the outer wall of the attic and the posterior wall of the external meatus and carefully look for any mastoid cells which may be on a level with the attic.

Bradford.

## OPERATION FOR THE CURE OF VESICO-VAGINAL FISTULA.

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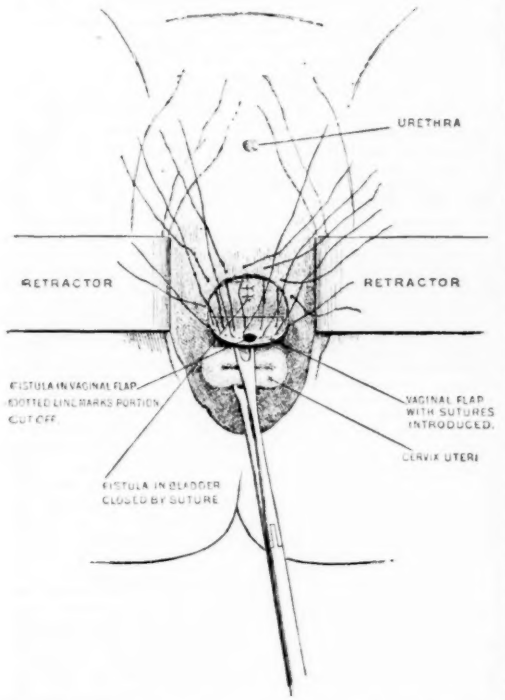
So far as I know two operations are performed for the cure of vesico-vaginal fistula—(1) the ordinary operation, and (2) Mr. Lawson Tait's operation. In the latter the edges of the fistula are split all round, the bladder edges turned forward and the vaginal edges backwards, and the raw surfaces between the two are brought into apposition by sutures limited to the freshened areas. The description of both operations is as simple as the execution of them is difficult. The chief risk of both is that one or more sutures may be left projecting into the bladder, and there are several objections to either. To bring linear surfaces into such accurate contact that no leakage can occur is too much to expect from an ordinary operator; and if this difficulty is overcome the sutures are apt to cause trouble from the dragging to which they are subjected by the normally tense vaginal wall. Then the thick unyielding vaginal wall, the larger size of the opening on the bladder side, and the depth of the bladder wound make satisfactory closure of the fistula in the bladder without perforation almost impossible. Some leakage into the wound from the bladder side is more than likely to occur. My notion is that to operate in these cases with the greatest probability of success the same principle must be applied that has revolutionised the treatment of intestinal fistula. The opening of the bladder must, like that in the intestines, be freely exposed, and in the former, as in the latter, complete closure of the visceral opening should be regarded as the key to a successful result. There are two anatomical points which may be noticed as bearing upon my operation: (1) that the

thick-walled vagina is separated from the thin-walled bladder by a layer of cellular tissue, usually so friable that a finger suffices to separate one from the other; and (2) that the blood-supply comes to the vaginal walls from every quarter, so that flaps with a good base may, without fear of sloughing, be reflected in any direction convenient.

CASE 1.—A woman twenty-four years of age was placed under my care by Dr. Proud of Maryport in August, 1895. Her history was that on April 15th, 1895, she was delivered by instruments after a hard labour lasting twenty-four hours and that the child was dead. After her confinement she noticed that she had no desire to micturate unless she coughed, but this caused her no alarm, for she did not know that anything was wrong. When she began to move about her urine constantly dribbled away, but when she was in bed about two ounces could be retained. In a letter which I had from Dr. Proud he said that the fistula was discovered by injecting milk into the bladder and watching it escape through the vagina. This device, although old, is so ingenious and easy of application that it is well worth remembering. On examinination the vagina at the upper part was found to be narrowed by cicatricial bands, especially behind. The cervix was small and eroded. About three-quarters of an inch from the cervix, in the centre of the anterior vaginal wall, was a rounded opening about the size of a split pea, which opened directly into the bladder. The operation was performed on Aug. 5th, 1895. A horseshoe-shaped flap was marked out on the anterior vaginal wall (see 1). The toe of the horseshoe included the fistula, and the heel which formed the base of the flap pointed to the cervix (1). The vaginal mucous membrane was divided with a knife,




the flap peeled off the bladder wall, and the opening into the bladder was fully exposed (2). All this separation was carried out with a finger and the blunt, closed ends of a pair of scissors, excepting round the fistula, where cicatricial tissue made the union between the bladder and the vagina very firm. The opening in the bladder was now closed by a fine continuous silk Lembert's suture, holding the muscular coats only (3). An ordinary surgical needle and needle-holder served for the purpose, being easy to apply, for the bladder wall was slack and there was no tension on the suture. The bladder was now tested by injection and proved to be water-tight. The operation was completed by cutting off the tip of the vaginal flap, including the fistulous opening into it, and adjusting the flap to the raw surface, where it was held by interrupted catgut sutures (4). The vagina was packed with iodoform gauze and a self-retaining catheter left in the bladder. The dressings and catheter were left undisturbed, except that the bladder was washed out thrice daily for the first week. On the eighth day the vaginal plug and catheter were removed. From beginning to end the patient had no trouble; the vaginal wound healed by first intention, the catgut sutures being absorbed, and she went home cured on the eleventh day. The opening in the vaginal flap in this case was cut off, but if it had been larger closure of it with a continuous catgut suture before replacing the flap would have been the better method of treating it.

CASE 2.—This was a woman forty-two years of age, mother of nine children, and a patient of Dr. Hume, to whom I am indebted for leave to publish the case and for the notes of it. Her trouble began after a bad confinement six years ago. She had been constantly wet since. A year before operation her last child was born. On examination a small fistulous opening was discovered in the anterior vaginal wall close to the cervix. On Nov. 18th, 1895, the operation described for Case 1 was performed by Dr. Hume. The opening in the bladder was closed with silk, the vaginal flap sutured with catgut, and the vagina plugged with iodoform gauze. The after-progress of the case is as follows. A catheter was used every four hours for the first five days. Afterwards the patient micturated unaided. She was discharged cured on Dec. 7th, 1895.

*Note for reference to lettering in illustration.*—1. Vaginal flap with sutures introduced. 2 and 3. Fistula in bladder closed by suture. 4. Fistula in vaginal flap; dotted line marks portion cut off. The figures refer to the figures in the text.

Newcastle-on-Tyne.

## PULSATING EXOPHTHALMOS.

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CONSULTING SURGEON TO THE LONDON HOSPITAL.

THE LANCET of Jan. 27th, 1894, contained an interesting address on "Pulsating Exophthalmos—a Plea for Early Ligature," by Mr. George Edward Walker, F.R.C.S. Eng. In this address Mr. Walker advanced some opinions on the pathology and treatment of the affection with which I cannot entirely concur, and referred to a case of my own. At the time the paper appeared circumstances prevented me from taking notice of it, and I have been obliged to defer commenting upon it until I had leisure to refer to the full details of the other cases on which Mr. Walker relied for the support of the views which he enunciated. Pathologically Mr. Walker's main contention appears to be that, with the exception of some traumatic cases caused by the perforation of the carotid artery within the cavernous sinus by a stab with a pointed weapon or a splinter of bone, these cases of pulsating exophthalmos are due to aneurysms (I do not know whether he means circumscribed or fusiform aneurysms or both), and that such aneurysms before they have become ruptured are adequate to produce all the characteristic symptoms of intra-orbital aneurysm. Now this, I believe, is exactly what a circumscribed or a fusiform aneurysm of the internal carotid artery in the cavernous sinus is incapable of doing so long as it remains entire. It is not until the artery or the aneurysm ruptures and the arterial blood from it is pumped into the sinus and so driven along the veins of the orbit that the characteristic symptoms of "intra-orbital aneurysm" commence. An aneurysm of the internal carotid in the cavernous sinus or of the ophthalmic artery at its origin may produce pressure symptoms affecting particular nerves (third, fourth, fifth or sixth), symptoms of obstruction to the return of venous blood such as œdema of the lids and conjunctiva, hazy ulcerated cornea, or injection of the sclerotic and conjunctiva, but not the typical symptoms of intra-orbital aneurysm. After the most careful examination of the evidence afforded by all the published cases known to me I stated the conclusions at which I had arrived in my article in Heath's "Surgical Dictionary" (1886) as follows:

"1. Beyond question the great majority of the traumatic cases have been instances of endocranial arterio-venous communications due to wound or rupture of the internal carotid artery in the cavernous sinus. 2. Beyond question the great majority of the idiopathic cases have been instances of endocranial arterio-venous communications due to a rupture of an aneurysm of the carotid or of an atheromatous carotid in the cavernous sinus. 3. The occurrence of a circumscribed aneurysm of the ophthalmic artery or one of its branches, as a cause of the same symptoms as were exhibited in the cases of arterio-venous communication, rests at present solely on the laconic report of Guthrie. Moreover, aneurysm of the ophthalmic artery in the orbit is a very rare affection." The first two conclusions have been accepted save by Mr. Walker by surgeons and writers who have published cases since my paper was written. The third, so far as evidence is concerned, now requires some modification, because on Sept. 18th, 1886, Dr. Dempsey of Belfast published an extremely interesting and instructive case in which, combined with a fusiform aneurysm of the carotid artery in the cavernous sinus, there was an immense saccular aneurysm on the upper part of the ophthalmic artery capable of holding a mandarin orange. The carotid artery was tied, but the aneurysm of the ophthalmic artery burst into the eyeball and profuse hæmorrhage from the cornea and secondary hæmorrhage from the ligatured artery proved fatal on the forty-first day.

The cases adduced or referred to directly or indirectly by Mr. Walker in his address are twelve in number and may be briefly summarised.

CASE 1.—A female forty-two years of age under Mr. Walker. She fell into a deep cellar on Aug. 19th, 1893. The accident was followed by noise in the right ear, venous congestion, and protrusion of the right eye. Great impairment of vision and bruit. The right common carotid artery was tied by Mr. Puzey on Sept. 19th, 1893. The patient recovered and was cured of the aneurysmal affection, but the sight was not improved.

CASE 2.—A female thirty-three years of age under Mr. Walker. She had received a blow on the left ear from a man's fist and was seen on June 6th, 1878. The symptoms were similar to those in the last case, the eye being on the cheek and the cornea opaque. The left common carotid artery was tied on July 23rd. The patient was cured completely, sight being fully restored.

CASE 3.—A boy aged fifteen years under Mr. Walker. He had sustained a fall in Feb., 1886, and was seen by Mr. Walker on Aug. 2nd. There was protrusion of the right eye with aneurysmal symptoms. The parents refused assent to operation and consulted some London surgeons, who concurred in this decision. The local conditions remained stationary until Jan. 20th, 1887, when, going to a theatre, he got into a crush and was much alarmed and almost fainted. The pulsation and murmur ceased and did not return.

CASE 4.—A man aged thirty-seven years under Mr. Puzey[1] and seen by Mr. Walker. He fell off his horse in March 1888. Aneurysmal symptoms supervened on the left side. Digital compression failed. He would not submit to ligature till May, 1889, when the swelling in the left orbit was of the size of a Tangerine orange and there was marked pulsation in the branches of the ophthalmic vein. The result was similar to that in Case 1, the aneurysmal symptoms being removed, but sight not being regained. The cornea gave way in a month's time and the iris became adherent. Mr. Puzey quoted my views on the pathology of the affection with approval.

CASE 5.—My own case,[2] a fracture of the base of the skull followed by the symptoms of intra-orbital aneurysm and undoubtedly due to arterio-venous communication. Some comments of Mr. Walker on the case I will discuss presently.

CASE 6.—Dr. Dempsey's case,[3] already referred to as a case of aneurysm of the ophthalmic artery in the orbit.

CASE 7.—A male aged fourteen years under the care of Mr. T. Richard Williams and Dr. Robert Jones.[4] The patient received a kick on the left temple. This was followed by the usual symptoms of "intra-orbital aneurysm." The case was diagnosed as one of arterio-venous communication. The carotid was ligatured and a cure resulted.

In the discussion on this case at the Ophthalmological Society some other cases were referred to.

[1] See THE LANCET, Feb. 14th, 1891.
[2] Transactions of the Medico-Chirurgical Society, 1875.
[3] Brit. Med. Jour., Sept. 18th, 1886.
[4] Transactions of the Ophthalmological Society, 1891.

CASE 8.—A male under Mr. Wherry for fractured base of the skull followed by aneurysmal symptoms. The diagnosis was arterio-venous communication. Ligature of the carotid was performed; paralysis resulted, but the aneurysm itself improved, the bruit and proptosis being removed. The paralytic symptoms were attributed to the sudden cutting off of the blood supply from the damaged area of the brain.

CASES 9, 10, and 11.—Three cases under Mr. Tatham Thompson, two being traumatic and in children, and *intra-orbital not intra-cranial* arterio-venous communication being diagnosed. In one case the exophthalmos and bruit entirely disappeared after electrolysis and in the second there was a partial recovery after repeated electrolytic operations. The third case was that of a female aged forty-two years. Eleven months previously a sudden shock or "crashing noise" had occurred in a protracted fit of vomiting during pregnancy. The patient complained of distressing noise, especially when lying down. The bruit was well-marked over a considerable area and a distinct thrill was felt on palpation. Pressure on the carotid lessened the bruit. Vision was reduced to a perception of light. The patient would not agree to ligature of the carotid, and when last seen the condition remained unchanged. The diagnosis was arterio-venous communication in the cavernous sinus.

CASE 12.—A case referred to by Mr. Adams Frost, which he had shown to the Ophthalmological Society in 1883. Here there had been pulsation *in both orbits*, but it disappeared from one. The man was still able without difficulty to follow the occupation of a wheelwright.

The foregoing cases certainly lend no kind of support to Mr. Walker's view that ordinary aneurysm of the carotid artery in the cavernous sinus and not arterio-venous communication is the usual cause of the group of symptoms known as "intra-orbital aneurysm." He does not adduce the results of post-mortem examinations to prove his contention, but relies entirely upon arguments which in the face of the sudden onset of the symptoms, often with noise in the head, and the venous pulsation, and in the face of the pathological evidence in our possession demonstrating traumatic arterio-venous communications and in idiopathic cases, ruptured aneurysm, or aneurysm of the ophthalmic artery in the orbit, and one or two instances of venous obstruction I do not think it necessary to follow for the purpose of further refutation. But before concluding I must correct one or two misconceptions with regard to my own case contained in Mr. Walker's valuable address. For instance, Mr. Walker erroneously states that in this case "electrolysis (I suppose of the distended orbital vein) was used twice." On the contrary, it was not used at all. Owing, I suppose, to the misplacement of a comma by the printer—the comma being placed after the word "unsuccessfully" instead of "cases"—Mr. Walker has mistaken the remark which I made on this point for acceptance instead of rejection of the procedure. "Galvano-puncture, tried twice unsuccessfully in other cases, did not appear to be a suitable remedy for this form of aneurysm." The tone of Mr. Walker's remarks in regard to the injection of perchloride of iron is not so judicial as one could wish, and he has misconceived the bearing of my observations in one or two particulars. For instance, he says: "Acute cellulitis of the orbit set in and became so alarming that on the 15th, *after the propriety of a second injection had been considered*, the carotid artery was tied and, as a matter of course, things straightway began to mend. The failure of the perchloride of iron to cure is said to have been due to the fact that only five minims were injected instead of fifteen, but this hardly tallies with the fact that the lesser quantity seems to have started pan-ophthalmitis." Why these italics, unless they are to emphasise the misconception involved in Mr. Walker's statement that the propriety of a second injection was *considered?* The proper course to alleviate the unexpected symptoms was reviewed in my own mind and I selected ligature of the carotid, whilst in my paper I simply stated *for the reader's information* why a second injection would not have been advisable. I object, therefore, to the italics, to the statement itself, and to the assumption of superiority involved in the phrase: "As a matter of course things straightway began to mend." Neither is there any incompatibility between my view that the injection of a few more minims of perchloride might have produced a better effect on the aneurysmal affection when cellulitis supervened after the injection of the smaller quantity. Anyone can understand that the injection of a few more minims of perchloride might have effected sufficient coagulation to stop the pulsation and bruit. Had the

*vis a tergo* thus been removed the severity of the cellulitis which I am inclined to attribute to a leakage through the puncture in the vein would certainly not have been increased and with prompt and complete coagulation inside the vessels might not have occurred at all.

Mr. Walker does not understand how pulsation of the globe could only last a few days and then disappear. The explanation seems to me to be that the first effect of the arterial blood being admitted into the ophthalmic vein and its branches was to produce pulsation of the globe, but as the blood passed more readily through the main channels of the vein and its external branches pressure on the globe was diminished and the pulsation became evident in the branches of the vein between the eyeball and the orbital margin instead of in the eyeball. There is one other observation of Mr. Walker in regard to my case to which I must allude. He speaks of temporisers resting their case on mine, but he omitted to mention the fact that I wrote strongly in favour of ligature and never advocated delay. From my own experience and the consideration of other cases I am disposed to agree with Mr. Walker—although not on the pathological grounds which he advances—that early ligature is, as a rule, the best treatment. Sight may not always be restored after ligature, but I think it will in the generality of cases and that early ligature offers the best and surest method of preventing impairment of vision. Leaving the case to itself may occasionally be followed by a spontaneous or accidental cure or some diminution in the severity of the symptoms, but generally the condition either remains stationary or becomes exacerbated with great impairment or loss of sight. Whilst objecting, therefore, to Mr. Walker's pathological doctrines, which appear to me to be heretical in the extreme on this subject, I am glad that I am in the main in accordance with him on the cardinal topic of the best form of treatment. Since the time of Mr. Nunnely, who did so much to advance our knowledge of the pathology of this interesting form of aneurysm, no one has had so large a clinical experience of cases exemplifying it as Mr. George Walker, and I cannot but heartily congratulate him on the fact that the successful results of his operations have prevented him from having the opportunity of seeing for himself that his view of the pathology of the affection is entirely unsupported by the actual conditions demonstrated by post-mortem examination.

Wimpole-street, W.

## IMPACTED URETHRAL CALCULI.

BY ARTHUR COURT, M.B., B.C. CANTAB.

THE following cases of impacted urethral calculi seem to me to present sufficient interest to justify their being recorded.

CASE 1.—This patient was a girl seven years of age who was brought to me three years ago suffering from pain in the abdomen and frequency of micturition. The urine being alkaline and containing muco-pus she was treated for cystitis. One day she was seized with retention and I found an oblong phosphatic calculus impacted at the meatus. It was easily removed and the cystitis was soon better. The stone weighed nine grains. Last January she had another attack of retention and on passing a catheter I could not feel any calculus, but a few days afterwards she again suffered from retention and this time another calculus was removed from the meatus. It consisted of oxalate and phosphate of calcium with a soft core of the same materials intermixed. Sounding failed to reveal anything further and the girl is at present in good health.

CASE 2.—This patient was a man forty-seven years of age and married, his youngest child being nineteen years old. When quite a young man he had an attack of gonorrhœa, but was otherwise healthy up to nineteen years ago, when he met with an accident to the buttocks and perineal region and was for nine months unable to work. He states that no blood was lost from the urethra, but that a catheter was required to relieve the bladder. He cannot remember whether he had any difficulty in micturition previously to the injury. From time to time he had had a discharge of thick fluid from the urethra, a teaspoonful or so coming away on each occasion, and there had been great and increasing difficulty in micturition. Two years ago he was treated for piles. In the beginning of May, 1894, he indulged in large quantities of beer and the retention became almost complete, the pain on micturition being severe and the necessity frequent. When I saw him for the first time on May 19th his pulse was quick and his temperature normal. There was no discharge from the urethra and when he was requested to pass urine only a few drops escaped. It was clear, acid, and free from albumin and sugar. There was a distinct thickening in the perineum behind the scrotum, and the prostate gland as felt per rectum was slightly enlarged but not tender. The introduction of a No. 8 catheter was attempted, but it was arrested at a point corresponding with the thickening felt externally, and all the smaller-sized instruments were subsequently tried, including a No. 1 silver catheter, but nothing could be guided through the stricture without using undue force. A hot bath, a dose of opium, and a mixture of sulphate of magnesia and henbane were ordered, and on the morning of May 20th the patient's condition was much the same, the urine dribbling away when he strained, but in the evening the retention was complete and was attended by great pain. No elastic instrument could be passed, but after persevering for some time a No. 1 silver catheter went through the stricture and a rough grating sensation was communicated to it when overcoming the obstruction, so that I feared a false passage had been made; after the catheter was withdrawn about four drachms of thick muco-pus escaped. On May 21st the catheter was passed again and was retained all day, the same grating sensation being experienced. On the 22nd the No. 1 catheter was passed and was kept in. On the 23rd three small calculi came away, together with a large quantity of muco-pus; a No. 2 elastic catheter was introduced and retained for four hours. On the 24th three more calculi were expelled and a No. 2 catheter was tied in, but withdrawn on the 25th. On the 26th, as the patient had passed no urine since the previous day, a No. 2 catheter was passed through with some difficulty, the same grating sensation being felt as before. On the 27th a No. 3 catheter was passed and kept in for four hours; nine calculi followed the first attempt at micturition after its withdrawal. On the 28th a No. 3 instrument was passed, but no grating was felt. On the 29th a No. 3 bougie was retained for two hours and five more calculi followed its withdrawal. On the 30th the patient had retention all day and a No. 3 catheter was passed in the evening; about two ounces of muco-pus and three more calculi came away on the first attempt at micturition after its withdrawal. Between May 31st and June 6th bougies Nos. 4, 5, and 6 were passed. On June 6th while the patient was passing urine the stream suddenly ceased and he felt confident that another calculus was caught in the stricture, but I could feel nothing with a No. 5 bougie. On the 7th Nos. 5, 6, and 7 bougies were passed, but no calculus was felt, nor was there any grating. On the 8th a calculus was passed weighing a little over two grains. The stricture was subsequently dilated up to No. 12, although not without several relapses, and no more calculi were seen. The twenty-four calculi which were voided weighed twenty-six grains and are all similar in appearance and composition, being a mixture of calcium carbonate and phosphates.

CASE 3.—This patient was a pit lad aged eleven years. His father died from vesical calculus, and a sister is now under my care with renal colic and hæmaturia. Three years ago his mother noticed blood in his urine. He had typhoid fever in September, 1894, but he had not since then suffered from any pain or hæmaturia, and was quite well until midday on March 8th, 1896, when he found that micturition had become impossible. He was brought to me on the following day, not having passed urine for nearly twenty-four hours, and an oblong calculus (fixed transversely across the urethra) was then presenting at the meatus. It was easily removed with forceps, and immediately behind it was another calculus firmly fixed, which could not be removed until it had been broken up. Free urination promptly followed, and no other calculus could be detected in the bladder. The one which was removed entire weighed three grains. It was formed of uric acid with a nucleus of blood-clot.

Cases 1 and 3 are instances of the position in which calculi are most frequently arrested when they enter the urethra of children, and consequently they call for no further comment; but Case 2 is interesting because it is unusual for a man to have a stricture for nineteen years without permanent damage being done to his bladder or kidneys. The

grating felt on passing the catheters was no doubt due to their coming in contact with the calculi. The man had never before passed a calculus, and they seem to have been formed primarily in the prostate and then to have found their way into the pouch behind the stricture. The smaller stones came through the stricture first, and last of all the largest stone, which was evidently impacted in its first attempt at escape.

Staveley, Derby.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### A CASE OF RUPTURE OF THE UTERUS.

BY S. WILKINSON, M.R.C.S. ENG., L.R.C.P. LOND., L.M.S., L.M. COOMBE HOSPITAL, DUB.,

HONORARY SURGEON TO THE BIRKENHEAD LYING-IN HOSPITAL AND LADIES' CHARITY.

ON April 11th I was called to a woman whom I found in the following condition. She had very severe hæmorrhage, but no pains. The os admitted four fingers. She had placenta prævia centralis; the presentation was a vertex one and the head was very large. I separated the placenta as far as I could and in the meantime sent for an assistant to administer chloroform. Under the anæsthetic I easily obtained possession of a foot by separating one side of the placenta and brought it down through the os. As there were no pains I made traction on the foot with a cloth for about twenty minutes or half an hour. As the bleeding continued and there were still no pains I brought down the second foot and left the body for a little while in the os. I was then able to bring down the arms at short intervals, and, finally, after another wait, I delivered the head with face posteriorly and to the right. The hæmorrhage then ceased, and as I felt the placenta loose in the vagina I removed it with my fingers. Chloroform was given only at intervals and was ceased before the delivery of the head. Six drachms were given. The patient rallied, took some ergot, and assisted us with the placing of the binder and asked if all was over. She then became restless, and after about twenty minutes we saw that death was threatening and informed the friends. The restlessness had brought on fresh hæmorrhage. More ergot was given and ice was placed in the vagina, and the uterus felt for from the outside. Owing to the abdominal fat, however, it could not be felt. The pulse was 96 and hardly to be perceived, partly on account of the super-imposed fat. The patient died two minutes after we had informed her friends. No transfusion apparatus was at hand. The friends, supposing that she had died under chloroform, charged us with her death, and, becoming maniacal, assaulted us. They seized the ornaments and attempted to strike us. The midwife (who sent for help immediately on seeing the case) was seized and would have been hurt but for our interference. At last we were obliged to send for the police to assist us to recover our belongings, and extricate the midwife from the corner of the room where she was penned up. It was reported to the police and to the whole neighbourhood that we had murdered the woman with chloroform. On this account I thought it best that an inquest should be held; otherwise I should have given a certificate.

At the necropsy a rupture of the cervical and uterine tissues was found four inches in length and opening into the right broad ligament. The extravasated blood separated the layers of this, and I believe that during the subsequent restlessness the peritoneal covering burst, as was found. The immediate cause of death was hæmorrhage. The delivery took me about an hour and a half to accomplish, during which time bleeding continued at intervals. After the arms were brought down I felt the os and it was then intact. The rupture, which I did not suspect, must have been caused by the passage of the large head, probably by the face (which was born first) passing over that site. The papers had the case reported as "Death under chloroform," but the resumed inquest entirely relieved me from this charge, though the report has certainly done me harm.

Birkenhead.

*** Mr. Wilkinson's case affords a very good example of the reckless allegations which get into the public press concerning the use of anæsthetics. To report this death as one of "death under chloroform" was entirely unjustifiable. Looking at the facts of the case it may be questioned whether, having brought the leg down, it would not have been better to have waited, giving ergot meantime, until pains came on, which must have happened sooner or later.—ED. L.

### THE LOCAL TREATMENT OF DIPHTHERIA WITH SODIUM HYPOSULPHITE.

BY HENRY A. WICKERS, L.R.C.P. LOND., M.R.C.S. ENG.

I HAVE for some time been using a solution of sodium hyposulphite as a local application in diphtheria and have been well satisfied with the results, three or four applications having generally been sufficient to clear away the false membrane. The solution is prepared for use by mixing equal parts of pure glycerine and a saturated solution of hyposulphite of sodium in water and is applied with a brush to the exudation and inflamed fauces once or twice daily or as often as may be deemed necessary. The glycerine by its adhesiveness keeps the solution longer in contact and also by its well-known local action helps to relieve that engorgement of the mucous membrane which seems especially favourable to the growth of exudation. It is probable that the hyposulphite has a continuing action as a germicide in the following manner: chemical decomposition is first set up by contact with the acid secretions of the mouth and throat, sulphur and sulphurous acid in a nascent state being set free; the latter being gradually converted by oxidation into sulphuric acid would in the same manner decompose further portions of unchanged hyposulphite, and so on until the hyposulphite was exhausted. Of course, this local treatment will not interfere with the general treatment, which must be adapted to the necessities of each individual case.

Upper Tollington-park, N.

### A CASE OF ANTIPYRIN ERUPTION.

BY H. W. WEBBER, M.D. LOND.

THE patient was a woman aged fifty-three years who had two months previously undergone supra-vaginal amputation of the cervix uteri for cancer. On Dec. 7th, 1895, I found the entire surface of her body covered with a copious eruption exactly resembling in appearance that of a severe case of measles; the face and eyelids were also swollen. The temperature was 101·4° F. and the pulse 102. She had been taking ten-grain powders of antipyrin twice daily for the previous three weeks for the relief of pain extending down the right thigh. These had produced no ill effect, but it appeared that on the evening of Dec. 5th she had eaten some unwholesome food, the results of which no doubt interfered with the proper elimination of the drug. Three grains of calomel and a mixture of ammonium acetate were prescribed, and the next morning the skin was almost free from eruption, the swelling of the face had subsided, and the temperature had fallen to 98°. The antipyrin was omitted and pills containing a quarter of a grain of morphia were substituted. Finding, however, that these did not relieve the pain so well as the antipyrin had done, after a few days the patient re-commenced taking the powders. After the second dose swelling and redness of the face came on and she had again to leave them off. No symptoms of cardiac depression appeared to be produced by the drug in this case.

Plymouth.

# A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## NORTH-EASTERN HOSPITAL FOR CHILDREN.

### A CASE OF UNILATERAL BRONCHIECTASIS TREATED BY RESECTION OF A RIB AND PARACENTESIS.

(Under the care of Dr. W. A. WILLS.)

THIS case is one which serves well to draw attention to the peculiarities presented by some cases of bronchiectasis and the not unusual difficulties encountered in their treatment whether by medical or surgical means. There are such obstacles at times to the formation of an exact diagnosis during life that it is possible some surgeons have taken too favourable a view of the advantages of pulmonary incision and the insertion of a drainage-tube. In this division of surgery, as in others, very much depends however on the selection of the case and the medical attendant's judgment as to the best time for operation. There is sometimes, perhaps, too great a tendency to postpone operation. The questions which suggest themselves on perusal of the case are fully discussed by Dr. Wills whose remarks we commend to the attention of our readers. For the notes of the case and the report of the post-mortem examination we are indebted to Mr. G. M. Edwards, M.B. Cantab., late house physician.

A thin, miserable-looking boy nine years of age was admitted into the North-Eastern Hospital for Children, Hackney, on March 13th, 1895, for chronic cough accompanied by profuse and offensive expectoration. The family history gave no record of phthisis on either side. Both parents at that time were alive and healthy. The boy was stated to have been "wasting and coughing" for about two years, for the last few months of which his breath and expectoration had been so offensive that his mother could hardly bear to be in the same room with him. He had had measles when two or three years old, but no other illnesses. No history of any inhalation of a foreign body was obtainable.

On his admission to hospital the patient was found to be a pale, emaciated boy, very dirty, with several impetiginous sores about his body. The ends of the fingers and toes were of a bluish colour and markedly clubbed. The temperature was 99·2° F. The chest was thinly covered and markedly deformed, the sternum being unduly prominent and the lower ribs much flattened laterally. The two sides were symmetrical. The respiratory movements were much modified, elevation being excessive, and expansion almost absent. The percussion-note over the whole of the left chest was hyper-resonant. On the right side, in front from the clavicle to the fourth rib, the percussion-note was absolutely dull, but over the remainder it was impaired. Posteriorly there was impaired resonance over the upper half and absolute dulness over the lower half of the same lung. On auscultation the breath sounds over the upper half of the right lung, both in front and behind, were tubular in character, and accompanied by numerous coarse râles heard both with inspiration and expiration. In the upper part of the axilla the sounds were almost cavernous and the râles very numerous, some bubbling and some metallic in character. Over the lower half of the lung the breath sounds were very weak and distant, and at the base posteriorly they were inaudible. Over the apex anteriorly and in the upper part of the axilla there was well-marked whispering pectoriloquy. Breathing over the left lung was everywhere harshly vesicular and free from adventitious sounds. Cardiac dulness was absent; impulse could not be felt. The heart sounds were normal in quality and position, and the pulse was 84 and regular. The breath was very offensive, but the tongue was fairly clean. The bowels were regular and the appetite was fair. The abdomen was rather prominent; the liver was enlarged, its edge being three fingers' breadth below the costal margin, and the spleen was slightly enlarged. The urine contained a large quantity of albumen. The patient was ordered a mixture of carbonate of ammonia, ether, oil of turpentine, and chloroform water; and also to wear at intervals a respirator charged with creosote.

On the 20th, seven days after admission, the breath was slightly less offensive. The sputum was very profuse and offensive, coming up in large quantities after a paroxysm of coughing. These paroxysms occurred five or six times in the twenty-four hours. In the intervals between these the boy was comfortable. There was no night sweating and the patient was bright and cheerful. The temperature kept about normal. On the 30th the patient's general condition remained unaltered. The sputum averaged from eight to ten ounces in the twenty-four hours. After standing it separated into three layers, the lowest being almost pure pus, the middle a fairly clear fluid, and the uppermost frothy and fermenting. Beyond slight variations in the extent of area over which whispering pectoriloquy was obtainable the physical signs remained unaltered. At the beginning of April the temperature ran a somewhat higher course, averaging about 99·0°. On April 16th, the physical signs continuing unchanged and pointing apparently to the presence of a cavity in the upper part of the right upper lobe, and there having been no diminution in the fœtor or quantity of the sputum as a result of the treatment, and tubercle bacilli being apparently absent, Dr. Wills asked Mr. Bilton Pollard to see the boy with a view to attempting drainage by surgical means. On the 18th it was decided by Dr. Wills and Mr. Pollard to try operative measures. The temperature at that time ranged daily between 98° and 101°. For a week daily observations were taken and marked on the boy's chest as to the situation and extent of the supposed cavity, this being mapped out as occupying the second and third interspaces in front and extending outwards to the upper part of the right axilla. On the afternoon of the 27th the boy was taken to the operating theatre, and anæsthetised. Mr. Pollard then resected a portion of the third rib in the axilla and found the visceral and parietal layers of the pleura adherent at this point. With a trocar and cannula a number of exploratory punctures were then made into the lung in the direction of the supposed cavity, and finally into different parts of the affected apex; none of these punctures, however, resulted in the discovery of any cavity, nor did any pus appear in the cannula. The wound was then lightly packed with iodoform gauze, and sal alembroth gauze and wool dressings being applied the patient was sent back to bed. During the whole operation the boy was kept lying well on the affected side to obviate the flow of pus from the diseased lung into the bronchi of the healthy lung. Care was also taken to keep him in this position until he had quite recovered consciousness. Throughout the operation an almost continuous stream of horribly offensive pus trickled from the mouth and nose, this towards the end of the operation being blood-stained. The boy took the anæsthetic (chloroform) well. On the 28th the temperature in the morning was 99·8°. The sputum was brightly blood-stained. The patient seemed none the worse for the operation. On the morning of the 29th he was not quite so well. The pulse was 108 and the temperature 101·2°. The wound was healthy. There was no discharge. On May 1st the temperature was 101·2°, the pulse 112, and the respirations were 30. The sputum was rusty. The cough was frequent and the patient was decidedly worse. During the following night the temperature reached 103·4°. On the 2nd the morning temperature was 100°, the pulse 128, and the respirations were 40. The boy was much worse and was evidently sinking. Early in the morning of the 3rd he became delirious, the temperature being 101·3° and the pulse 140. Death took place at 4.30 P.M.

*Necropsy.*—The body was found to be emaciated. There was a surgical wound in the right axilla leading to an opening through the chest-wall into the lung. This opening was formed by the resection of a portion of the third rib. The right pleura was adherent generally over the upper half of the lung, but fairly free below. The right lung was small and shrunken, dark reddish-brown in colour, and of a tough leathery consistence, sinking in water and quite airless. On section it was found to be consolidated from apex to base; the distinction between the lobes was quite lost. The bronchial tubes were all dilated and had thick, tough walls; the dilatation was regular and no tendency to

sacculation was seen anywhere, the result being a series of branching tunnels varying in size from a crowquill to that of the little finger. The tubes in the upper half of the lung contained fluid pus, but towards the base the contents became thicker and thicker, the lowermost being blocked up with a thick, cheesy, and excessively fœtid material which could hardly be squeezed out of them. The left lung was large and showed marked emphysema, but was otherwise quite normal. The liver and kidneys were extremely fatty. The brain was not examined.

*Remarks by* Dr. WILLS.—I have reported this case of operation on a patient suffering from bronchiectasis for two reasons—first, because even now the number of recorded operations is not very great; and, secondly, because it well illustrates the difficulty of diagnosis which seems to be ever present in persons suffering from this complaint. In this instance the mistake in diagnosis consisted in the conclusion that there was a single definite cavity which could be reached surgically, whereas there was general bronchial dilatation, but no specially dilated bronchus to which the term cavity could be applied, and the physical signs of a cavity had been produced by consolidated lung surrounding a series of branching bronchial channels. Why the signs of excavation should have been localised to a spot at the upper part of the axilla, where the conditions giving rise to such physical signs appear to have been present throughout the lung, I confess I cannot now understand. That the boy was suffering from bronchiectasis and not phthisis was tolerably clear from the unilateral nature of the physical signs—the character of the sputum, the manner of its expulsion, and the absence of tubercle bacilli and to some extent from the history of the onset. There seemed no reason to suppose that the affection originated from a foreign body inhaled into the lung, as there was no account of such an accident having occurred, and the part of the lung apparently most affected being above rather than below the level of the main bronchus also made it unlikely that the cause was of this nature.

That there is often much difficulty in coming to a correct conclusion as to the exact condition present in the chest of patients with symptoms such as those above described is well shown by the discussion which took place on the paper by Dr. C. T. Williams and Mr. Godlee describing two cases of bronchiectasis treated by tapping and drainage,[1] which is referred to again shortly. Dr. Goodhart described a case of unilateral general bronchiectasis and localised empyema secondary to the inhalation of a pea into the bronchus, which he mistook for pleural effusion. In another case the side affected with bronchiectasis was thought to be the seat of pneumonia. Dr. Percy Kidd quoted a case where bronchiectasis was thought to be present in only one lung, but where it was afterwards proved to be double. He referred to the difficulty in deciding the existence of pleural adhesions. Dr. Cayley emphasised the importance of the existence of solid lung surrounding the cavity and its probable association with pleural adhesions. He also remarked on the liability to abscess of the brain in these cases. Dr. Biss thought the danger from septic poisoning so great that an operation should always be considered. Dr. Barlow and Dr. Coupland quoted similar cases to Dr. Goodhart's and Mr. Gould referred to the difficulty of determining the relation of the cavity to the spot where the physical signs are most marked, stating that he thought preliminary aspiration was a necessary step in diagnosis. These remarks appear to me to show very clearly how great are the practical difficulties the physician meets with when attempting to decide if a particular case is a suitable one for operation and in selecting the most suitable spot for the operation.

Surgical proceedings have been undertaken now in a sufficient number of cases to enable one to appreciate the advantages and disadvantages of such treatment. It may be interesting to shortly summarise a few of these cases. Dr. C. T. Williams[2] describes a case of bronchiectasis affecting the right lung generally, but with one specially large saccule in the lower and sternal part of the upper lobe. This was tapped after making a skin flap. Diminution of expectoration occurred for a few days, but then symptoms of pyæmia came on, and death occurred about six weeks after the operation. Dr. Williams and Mr. Godlee report two cases.[3] In one, a man aged sixty-seven years, the disease was quite localised and the result very satisfactory; in the other, a woman aged twenty-one years, the bronchiectasis was more generalised, and here the surgical treatment was more difficult and the effect less successful. Another case was also mentioned of a boy aged thirteen years with unilateral but somewhat extensive bronchiectasis, where a cavity was reached by puncturing to a depth of about four and a half inches. The result two years later was fair. Two other cases under Dr. Williams were also referred to in which death occurred shortly after the operation. His conclusions are that the operation is indicated—(1) where antiseptic treatment had failed and death from septic pneumonia appeared imminent, and (2) where the bronchiectases are confined to one lung, are in the lower lobe, and the overlying pleura is adherent. Dr. Douglas Powell[4] relates the case of a man aged forty-nine years with several bronchiectatic cavities in the lower lobe of the right lung. Mr. Lyell opened the lowest of these after finding pus by exploration in the eighth intercostal space. The patient was *well turned on the opposite side* during the operation. There was free drainage for a time and much improvement, but afterwards great difficulty in maintaining drainage. The man got gradually weaker, pleuro-pneumonia (? infective) affected the other lung, and he died. Post mortem it appeared that the lowest of several intercommunicating bronchiectatic cavities had been tapped, and that as the lung contracted the drainage had been interfered with. In the remarks on this case stress is laid on the difficulty in diagnosing between bronchiectasis and empyema, and Dr. Powell emphasises the importance of bulging of the chest-wall and distension of the interspaces in empyema as against flattening and retraction in bronchiectasis. He considers it desirable to operate over the centre of the physical signs, not over the lowest point. With regard to apex cavities Dr. Powell says the advisability of operating is doubtful, as from their position the drainage from them is efficient without operation, but he admits that the symptoms are sometimes ameliorated. It seems likely that this improvement is due to the absence of irritation of the neighbouring bronchi by the fœtid secretion in its course towards the main bronchi previously to its expulsion by coughing. Dr. Biss[5] reports a similar operation on a man aged thirty-two years, suffering from multilocular bronchiectasis of the right lung. In this case, also, the patient was turned on to the left side "as far as could be done without embarrassment to his breathing." There were firm pleural adhesions and much pleural thickening. The cavities contained a quantity of mortary, fœtid material; one of the largest cavities was tapped. The cardiac apex was displaced one inch to the left, and for the first fortnight the patient was under observation the physical signs were those of fluid. For a time there was considerable improvement in the lung symptoms, but death occurred a month after the operation from infective brain abscess and meningitis. Mr. Rickman Godlee, in a series of lectures on the Surgery of the Lungs,[6] quotes a very similar case to mine, where the physical signs were clearly those of a cavity beneath the fourth right intercostal space in front. A puncture was made with a trocar, but no pus was found. However, an incision was made, but no cavity or pus was found. The patient was lost sight of after the wound was healed. Mr. Godlee mentions the importance of thoroughly exploring before proceeding further. He also quotes several successful cases of draining basic cavities, probably resulting from pneumonic abscess. The conclusions drawn by Mr. Godlee are that bronchiectatic cavities when single (rare) will be cured by operation, when multiple (common) they offer but small chance of relief by our present surgical methods. An attempt, however, may be made to open the main cavity, if such can be found, but only if the pleura be adherent. Tuberculous cavities should only be opened in cases where the cough is harassing and the cavity single. Sonnenburg[7] describes operations performed on tuberculous cavities, combining this treatment with injections of tuberculin. He obtained fairly satisfactory results from the operation enabling the diseased tissues to be thrown off when affected by the tuberculin reaction, and a granulating cavity left. But he considers that the disease should be local and not chronic and stationary, as such cases are better left alone. Five cases are reported, three of which

[1] Transactions of the Royal Medical and Chirurgical Society, vol. lxix., 1886. [2] THE LANCET, Dec 30th, 1882.
[3] Transactions of the Royal Medical and Chirurgical Society, vol. lxix., 1886.

[4] Ibid., vol. lxiii., 1880.
[5] Ibid., vol. lxvii., 1884.
[6] THE LANCET, March 5th, 1887, et seq.
[7] Deutsche Medicinische Wochenschrift, 1891.

were nearly well at the time of the lecture; but this was soon after the operation, and it seems difficult to believe that cases can be found where the tuberculosis is so strictly localised that a single operation would reach all the foci. Obviously the later history of these cases is wanted before a judgment can be formed on this method of treatment.

Admitting the desirability of surgical treatment in such cases as may be suitable, as I think all the evidence fairly justifies us in doing, there then remain certain points which have to be considered before coming to a conclusion on the matter. I will now enumerate them. Determination of (1) the existence of a cavity, or whether the symptoms and signs are due to pleural effusion or pneumonia; (2) the locality of the cavity or cavities; (3) the number of cavities and their depth, and the presence or absence of general bronchial dilatation; (4) nature of the cavity, whether tuberculous or bronchiectatic; (5) whether the cavity be in the lung or the symptoms be due to an empyema which has burst into the lung; (6) the presence or absence of a foreign body; and (7) the existence of adhesions. There are also certain more surgical points to be considered—namely, the best position of the opening for drainage, and in the case of apex cavities especially, whether it is possible to establish by operation better drainage than the natural drainage into the main bronchus which already exists. This natural drainage is, however, often not so good as one might expect from the relative position of the cavity and the bronchus. It will not, perhaps, be out of place to emphasise here the importance of not turning the patient over on to the sound side during operation and after anæsthetising, on account of the very real danger of the flow of pus from the affected side into the bronchi of the sound side. If this should take place, death, either from immediate suffocation or from infective pneumonia occurring during the next few days, is an almost certain result. The determination of the points mentioned above must be left to the acumen of those concerned with the case, but if a mistake is made in diagnosis and consequent treatment they have at least the satisfaction of knowing that they are in very good company, and that similar mistakes have been made, and probably will continue to be made, by even the most skilful practitioners of the healing art.

# Medical Societies.

## HARVEIAN SOCIETY OF LONDON.

*Exhibition of Specimens.—So-called Vitiligo.—Some Cases of Syphilis in Children.—Psychroæsthesia.—A Case of Cretinism.—Left Hemianæsthesia with Paralysis of the Left Side of the Palate.—Chronic Rheumatoid Arthritis.*

A MEETING of this society was held on May 21st, Dr. GOW being in the chair.

Dr. TRAVERS SMITH showed for Dr. Macevoy a man aged fifty-seven years whose Skin had lately become generally Pigmented, the parts most deeply pigmented being the face, the shoulders and backs of the arms, the external aspect of the legs, a narrow line running over the spine, and a broad belt spreading from over the scapulæ to the front of the thorax and passing underneath the axillæ, where, by contrast, the skin appeared quite pale. The darker areas, with the exception of the thin line over the spine, were more or less thickly studded over with circular or oval white patches, varying in size from that of a hemp-seed to that of a split-pea. On the legs most of these spots were distinctly below the level of the surrounding dark skin and were anæsthetic. The man complained that for the last six months his appetite had been flagging and that his skin had been irritable. He denied having had syphilis or small-pox, or, indeed, any eruption, but said that he heard that when a child he had had the "cow-pox."—Dr. T. D. SAVILL expressed the opinion that the case presented the concluding stage of prurigo, by which he meant a disease attended by severe itching accompanied by small papules and erythematous blotches. Such cases were frequently followed by considerable pigmentation around the seats of the original skin lesions, and the diagnosis was in this case supported by the history and the irritation from which the patient still suffered, which were absent in vitiligo. The position across the shoulders and its characters here favoured the idea that the prurigo in this instance had been originally initiated by pediculi.—Mr. JACKSON CLARKE observed that the lesions in this case were not scars, but due to pigment atrophy as in leucoderma or vitiligo. In several particulars the case differed from average cases of leucoderma. In the first place the lesions were smaller and tended to run in streaks; then the patient was much older than was usual at the commencement of the disease, and then again the affection was attended with marked pruritus, which was not the rule.

Mr. JACKSON CLARKE showed three cases of Syphilis in Children. The first patient, a little girl aged three years, had probably acquired the disease after birth, seeing that the mother was treated for a hard sore when the child was three months old, and that when she first came for treatment, at the age of twelve months, she had a general superficial eruption. She had done well on mercury inunction. The second case was that of a healthy-looking girl aged twelve years. Three years ago she had small gummata of the tongue. These ulcerated, and had left fissures and a superficial glossitis. There were typical Hutchinsonian teeth. When first seen the child was almost blind from interstitial keratitis, though at the present time the corneæ had a normal appearance and the patient could see well. She had been kept steadily on iodide. The third case was that of a baby aged ten months, who had been under treatment for three weeks. When first seen she was extremely asthenic and anæmic and there were mucous tubercles at the anus. There was no enlargement of the liver and spleen. Half a drachm of mercury ointment had been rubbed in over the lower part of the abdomen every night and she had gained greatly in strength.

Mr. HUBERT C. PHILLIPS showed a girl twenty-five years of age suffering from Cretinism. The patient was in good health until she was six, when she moved from Kent to London. It was a typical case. The weight and measurements had much diminished since the commencement of treatment by thyroid tabloids, of which she is now taking fifteen grains a day. Coarseness of the skin and hair is much less marked and strength is increased, the only objectionable symptom during treatment being cephalalgia. The patient is 3 ft. 10 in. in height.

Dr. LEONARD GUTHRIE showed a man aged fifty-two years suffering from Psychroæsthesia (Silvio's). The symptoms were of four years' duration and dated from the occurrence of a loose cartilage in the right knee-joint. They consisted chiefly of constant subjective sensations of extreme and painful cold affecting the whole of the right lower extremity at first, but recently extending to the right arm and left leg to a less degree. The right thigh and leg were somewhat wasted. There was no local tenderness or anæsthesia over the course of the nerves. The electrical reactions were normal, but he showed a remarkable tolerance to strong faradaic currents. Tactile sensations were perfect and also appreciation of heat and cold. The application of heat relieved whilst that of cold intensified the symptoms. There was no actual loss of temperature in the limb and no œdema. The knee-jerks were normal and muscular sense was perfect. He regarded the case as possibly one of early syringomyelia.—Dr. SAVILL thought the case was one of extreme interest and that its features had been most lucidly brought before the society. He agreed with the diagnosis of syringomyelia. Although the symptoms of this disease usually begin in the arms, he had seen a case which had started and predominated, as this one had done, in the lower extremities. The patient was a female aged twenty-nine years, who was admitted under his care into the Paddington Infirmary for paraplegia. The symptoms had started with a numbness and weakness of the feet, followed later by numbness and weakness of the hands. The paresis always predominated in the legs, though the patient could walk a few steps on admission. A few weeks after admission she suddenly fell back in bed and died. At the necropsy the central canal of the spinal cord was found to be dilated from end to end and surrounded in the upper half by a small-celled gliomatous new growth, which by its extension into the medulla had produced sudden death.—Dr. CAGNEY congratulated Dr. Guthrie on the very admirable summary of clinical facts he had given the society. The inference which Dr. Guthrie based upon these facts—viz., the diagnosis of early syringomyelia—was, after all, but matter for speculation, since the early symptoms of that disease, he submitted, had not been adequately observed. It was equally true that the interesting case before the

society did not closely conform to any clinical type at present recognised in text-books, but was doubtless one of a very large class with which riper experience would make us familiar. He was not himself disposed to assign a special cause to the symptoms. He pointed out that the wasting paralysis was approximately hemiplegic in character. Extensive, albeit unusual, sensory change was a combination suggestive of cerebral disturbance. He did not suppose that in such a case any change would be found post mortem.

Dr. LEONARD GUTHRIE also showed a woman aged twenty-eight years suffering from Hemianæsthesia and Hemianalgesia of the Left Side of the Head, Face, Neck, and Chest to the level of the third rib, and of the whole of the left upper extremity. She had also double rotatory nystagmus, with marked restriction of fields of vision, the left being most affected. These symptoms were of about three months' duration. Within the past month she had suddenly developed paralysis of the left side of the palate with regurgitation of fluids through the nostril and markedly nasal voice. There was no history of sore-throat, no other motor paralysis, and the knee-jerks were normal. Painless bullæ had appeared from time to time on the fingers of the anæsthetic hand. The symptoms were regarded as functional, but he thought that they might be forerunners of disseminated sclerosis.

Dr. KNOWSLEY SIBLEY showed two cases of Rheumatoid Arthritis successfully treated by the hot-air method. The first, a woman sixty-six years of age, came under his care at the North-West London Hospital in 1892, having previously been under treatment at another hospital. At this time she had considerable enlargement of all the fingers of both hands. These were quite fixed and very painful. The movements of the wrists were also very limited; so also was the right elbow. The knees and shoulders were also enlarged and painful. The patient attended for many months, and although a large number of drugs and remedies were tried she gradually became worse and had to give up her occupation. Then she was unable to dress and finally unable to feed herself and was becoming more hopeless every day. At this time, Aug. 1st, 1894, one of the Tallerman-Sheffield hot-air cylinders was brought to the hospital and this new treatment was prescribed. After the first application the pain was considerably relieved and the joints showed some improvement. After the fourth application the patient, who had been unable to follow her business for many months, was again able to use her needle. After the eighth application with the exception of the right index finger all the others could be flexed without much difficulty. On Aug. 24th, after the ninth operation, the patient reported she had resumed her occupation and she was able to walk up and down stairs without pain. The patient continued under this treatment till Sept. 13th, having then had twenty baths, when she considered herself practically cured, but as the apparatus was still at the hospital she had an occasional bath up to the end of October, 1894. From that date to November, 1895, she continued at her work and with the exception of minor ailments suffered no inconvenience from her former trouble. At this time she again complained of pain and stiffness in the right hand, so three more baths were prescribed; she again rapidly improved, and from that time to the present has continued much as she now is and has not relapsed. The other case was a woman aged sixty-nine years. For some years her hands had been painful and the joints enlarged. She first came under Dr. Sibley's care at the hospital on April 22nd, 1896. Her knees and ankles were somewhat stiff and painful, but the hands were chiefly affected; all the finger-joints were much enlarged; she also suffered much from bronchitis and asthma. This patient had now had fifteen baths, with the result that her knees and ankles were much less painful and her hands much less swollen; so, also, her cough and general nervous condition had greatly improved. Dr. Sibley explained that the treatment consisted in placing one limb, usually the most affected one, in a cylinder heated to about 150° F., and this temperature was gradually increased up to about 240°. The limb was allowed to remain in for about forty minutes. During this time the patient usually perspired freely from the limb, and, in fact, from the whole body. The temperature as taken in the mouth rises one or two degrees, and the frequency of the pulse is also increased. About a quarter of an hour after the limb is removed the temperature returns to what it was before the treatment. The pain in the affected and other parts was greatly relieved, and the patient experienced a considerable feeling of relief generally; especially it was noticed that the bronchitic condition, which so often accompanies this affection, was also much benefited.

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

### SECTION OF SURGERY.

*Notes on Ovariotomy.*

A MEETING of this section was held on May 1st, Sir W. THORNLEY STOKER, President, being in the chair.

Sir WILLIAM STOKES read a paper on Ovariotomy based on the results of the last twelve cases he had operated on, ten of which were brought to a successful issue. After pointing out that in the modern evolution of abdominal surgery ovariotomy stands out in boldest relief and referring to the early cases of Clay, Spencer Wells, and Baker Brown, he described the treatment preparatory to operation and quoted with approval the views of Professor Ashton of Philadelphia on this subject. He then discussed several points in connexion with the *technique* of the operation, such as the question of a free or a limited incision, the mode of dealing with adhesions and with the pedicle, the variety of ways in which the ligature may be employed and in which sutures may be inserted, and, lastly, the rules that should be observed in the subsequent treatment. He concluded by remarking that the operation ought not to be regarded as belonging exclusively to the limited province of the specialist, but might be undertaken with confidence in the great majority of instances in a general surgical hospital.

Mr. TWEEDY did not think that general surgeons should perform the operation of ovariotomy. Was the general surgeon prepared to operate on a fibro-myoma in which there might be extensive adhesions to the intestine, bladder, and ureter? Was he aseptic enough? A general surgeon meets every day with septic cases and has his hands bathed in pus. As regards the operation for ovarian tumour there was generally no difficulty in it when once it was diagnosed. The only way to diagnose an ovarian tumour was to feel the pedicle and the round ligament. The person who diagnosed the case should operate on it. The necessary asepsis could only be obtained in a room wholly set aside for abdominal surgery, and not in an ordinary operating theatre.

Mr. WILLIAM THOMSON said that Sir William Stokes had rightly claimed that these cases should be operated upon by the general surgeons. Mr. Tweedy's claim was for the gynæcologist, but when it came to a question of septic hands the gynæcologist was at no advantage in that respect after his morning's examination of his cases. If a general surgeon was unfit to open a serous cavity because of the state of his hands, then he ought not to operate at all or touch a wound; but, in spite of this supposed inability to have aseptic hands, septicæmia had been practically banished from general hospitals. Mr. Tweedy claimed that the case ought to belong to the person who diagnosed it—meaning the gynæcologist. But this assumed that no one else could diagnose an ovarian tumour and that a gynæcologist was necessarily able to operate. This claim was an impossible one. The gynæcologists had been taught by the general surgeon, to whom were due the splendid developments in abdominal surgery.

Dr. WINIFRED DICKSON said that a gynæcologist did not meet with much pus because the general rule was that the patient was douched before being examined. The vagina did not generally contain streptococci or staphylococci, and the gonococcus was not particularly dangerous in the peritoneum. If a case was suspected to be one of cancer it was not examined on the day of an operation. As a general rule gynæcologists operated early in the morning before going round the hospital. She thought nobody used Spencer Wells' trocar now. One point about the after-treatment not mentioned by Sir William Stokes was that the sooner purgatives were begun the more quickly the patient seemed to recover. A great many operators gave a purge twelve hours after the operation.

Mr. LENTAIGNE said that in cases of laparotomy the shock could be lessened by avoiding injury to the peritoneum by a foreign fluid. He now always douched and irrigated with sterile normal saline solution. In suturing the wound he first sutured the peritoneum and then the layers of the abdominal wall with silk, and, lastly, the skin with catgut. He then sealed up the wound with celloidin and used no

dressing except to prevent it from being rubbed by the bedclothes. The wound could be seen through the transparent celloidin. The celloidin was a great improvement in the treatment of strictly aseptic wounds. He thought it made no matter whether a man was a general surgeon or a gynæcologist; if he was a good surgeon he should do ovariotomy all right. The best method of rendering the hands aseptic was to use oxalic acid. If an operator opened the intestine it might easily be as bad as if he had touched some pus, still he could make his hands clean and finish the operation. He could not altogether agree with Dr. Dickson's opinion that the gonococcus is not dangerous.

Sir WILLIAM STOKES, replying, said that Mr. Tweedy stated that unless the pedicle could be felt an ovarian tumour could not be diagnosed. A considerable number of ovarian tumours, however, had no pedicle at all.

# Reviews and Notices of Books.

*Naturwissenschaftliche Einführung in die Bakteriologie.* Von Dr. FERDINAND HUEPPE, Professor der Hygiene an der Deutschen Universität zu Prag. Mit 28 Holzschnitten im Texte. Wiesbaden: C. W. Kreidel's Verlag. (*Scientific Introduction to Bacteriology.* By Dr. FERDINAND HUEPPE, Professor of Hygiene at the German University, Prague. With 28 Woodcuts in the Text. Wiesbaden: C. W. Kreidel.) 1896.

DURING the last few years the numerous text-books on bacteriological technique that have been placed on the market have rendered it impossible for the student to protest that he has no opportunity of gaining a book knowledge of bacteriology. Unfortunately, however, a book knowledge is not all that is required, nor is it absolutely necessary that a great amount of thought should be expended either in the compilation or in the working through of such books. We have now before us, however, a scientific introduction to bacteriology by Professor Ferdinand Hueppe, in which that author is found at his best. Those who have already followed Professor Hueppe through his "Methods" and through his "Forms of Bacteria" will be quite prepared to find here a philosophical treatment of bacteriology such as has seldom been attempted; in place of a mere repetition of methods and enumeration of species Professor Hueppe has grappled with the fundamental questions concerned and has in clear language given a cogent, philosophical, and scientific account of bacteria and their relation to the processes with which they are said to be associated.

In the first chapter the author deals with the forms and structure of bacteria, and the description given is certainly the best that has yet appeared, as, although it is extremely concise, it contains a *résumé* of the best work that has yet been done on this subject, Bütschli's and Alfred Fischer's work on the structure of bacteria receiving special attention. The chapter on the Vital Manifestations and Relations of Bacteria is in many ways extremely suggestive, especially that portion relating to their nutrition and the formation of their products. A short description of the Organisms Specially Associated with Specific Infective Diseases is followed by a chapter on the Causes of Disease, treated historically up to the point at which infection and contagion came to be recognised as due to the action of bacteria. The latter part of the book deals with the most interesting questions of immunity, vaccination, protective inoculation, and curative inoculation; in connexion with the latter the production and use of antitoxins are considered and the antitoxic and bactericidal bodies of the blood. The question of the Specificity of the Action of Serum in Curing Disease is carefully gone into and we have in this chapter one of the most interesting that has yet been written on this subject. It is pointed out that even the normal serum of healthy warm-blooded animals has an antitoxic effect on specific poisons; the blood of healthy persons in many cases paralyses or antagonises the poisons of diphtheria, typhoid fever, and cholera, although it appears to exert no effect upon tetanus and snake poisons and abrine. It has been objected, however, that in the case of diphtheria, at any rate, the patients may have undergone a slight attack of diphtheria resulting in the formation of antitoxin in the blood; this, however, can scarcely hold in the case of the other diseases. Specific antitoxins produced in the blood act *in vitro* upon certain poisons different from those by which they have been produced; these, however, do not act and inter-act with one another in any very regular manner; for example, anti-venine antagonises the poisonous action of abrine, but not that of diphtheria, tetanus, or ricine; abrine antitoxin exerts its action against snake poison, diphtheria, and ricine, but not against tetanus toxine; tetanus toxine, which is active against venine, has no effect on ricine and abrine; anti-rabic serum exerts an influence on venine, but none on diphtheria or the poisons of tetanus, ricine, or abrine, whilst streptococcus serum, which certainly appears to exert some effect against snake poison, is inactive against all the others; cholera serum antagonises snake poison, but has no effect upon any of the others, whilst diphtheria antitoxin is inactive against venine, the poison of tetanus, ricine, and abrine; the antitoxic serum of "Rothlauf" and typhoid fever are also inactive against the whole of these toxines. Many of the antitoxic serums exert a similar active effect even when the mixture takes place in the body and not in the test tube. Some, however, which act when the mixture is made *in vitro* have no effect when the two substances are introduced separately into the body, and others again which do not antagonise one another *in vitro* still set up a protective action when injected into a living body, an example of this being given in the case of anti-rabic serum when prepared in the rabbit. This serum does not protect against rabies in the dog, but it has the peculiar property of immunising the animal against a dose of cobra poison.

These actions and inter-actions are exceedingly interesting and may be studied with great advantage. Professor Hueppe concludes as the outcome of all this that the specificity of the action of "anti-körper" is not necessary in order to produce an antitoxic action. However, we must refer our readers to the original for further information on this subject, as our space is too limited to allow of further excerpts being made from this interesting chapter.

Chapters on the prevention of disease and the history of bacteriology, though condensed, are exceedingly interesting, and the book as a whole is well worth a most careful reading by every student of bacteriology. It is the work of a master of the subject, who is not only a scientific man in the sense of being an observer, but also in the sense of having a truly philosophic mind.

*The Diseases and Deformities of the Fœtus: an Attempt Towards a System of Antenatal Pathology.* By J. W. BALLANTYNE, M.D., F.R.C.P. Edin., F.R.S. Edin., Lecturer on Midwifery and Gynæcology and on Diseases of Infancy and Childhood, School of Medicine, Edinburgh. With Plates. Vol. II.: *Congenital Diseases of the Subcutaneous Tissues and Skin.* Edinburgh: Oliver and Boyd, Tweeddale-court. London: Simpkin, Marshall, and Co. 1895.

THIS the second instalment of the author's work on "An Attempt Towards a System of Antenatal Pathology" has been delayed in its appearance by unavoidable causes. The author appears to have found his task of greater magnitude than was originally anticipated. He has had to choose between undertaking to embody a consideration of all the

remaining maladies of the fœtus within the original limits he had prescribed for himself and discussing all the divisions of the subject in as much detail as in the first volume. He has decided to choose the more arduous alternative, and we think with good reason, for few will differ from him in his opinion that it is better to discuss fully part of a subject than to present the whole of it imperfectly. The present volume deals with the Congenital Diseases of the Subcutaneous Tissue and Skin. The author has evidently devoted to the portion of the subject considered in the volume before us the same laborious industry which distinguished the first instalment of his work. The historical notes must have involved considerable research. It is interesting to observe that sclerema neonatorum has no written history prior to the commencement of the eighteenth century, though, perhaps, we can hardly agree with the author in considering the fact surprising on the ground that it is impossible to doubt its occurrence in earlier times. Modern medical literature, surely, affords almost innumerable instances of diseases that have only been recognised comparatively recently, though as regards many or most of them we may be sure of their having existed in ancient times. The book is illustrated by several excellent plates and there is a copious list of the authorities consulted.

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*A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from Models in the Museum of the St. Louis Hospital, Paris.* London: The Rebman Publishing Company, Limited, 11, Adam-street, Strand.

THE reproductions made for this Atlas are photo-lithochromes, and there are also explanatory woodcuts and text by Besnier, Fournier, Tenneson, Hallopeau, Du Castel, members of the staff of the hospital, with the coöperation of Feulard, the curator of the museum, and Jacquet the secretary. These names are a guarantee of the judgment with which the models for reproduction will be selected and of the interest of the descriptive letterpress. The translation is edited by Dr. Pringle, who points out and explains the differences between English and French nomenclature and gives references to English text-books and monographs.

Those who have visited the museum of the Hôpital de Saint Louis are aware that it possesses a unique series of wax models of diseases of the skin beautifully executed by Baretta and the publication of this Atlas renders this museum to a large extent accessible to all the world. The process of reproduction by photo-lithochrome is necessarily faithful as to the outline, while the colouring is also good on the whole, but the result is less pleasing than chromo-lithographs from drawings of the living subject, as the wax model has necessarily a corpse-like appearance and the artistic accessories are limited to the frill of white cloth round the model. The actual area of disease represented, though of life-size as far as it goes, is small—nine and a half by seven and a half inches—just sufficient to take in the face, and the representation of the characters of the lesion rather than the distribution is therefore the chief aim. If, however, an actual case is compared with a plate a very little imagination will compensate for these slight drawbacks, and recognition of the nature of the eruption will rarely be hindered thereby.

Each part, of which the price is 10*s.* 6*d.*, contains four coloured plates and a liberal allowance of woodcuts in the text, and the enumeration of the subjects of the plates in the three parts now before us will give the best idea of the scope of the Atlas, although the number of parts which the complete Atlas will contain is not stated. Part I. comprises Lupus Vulgaris of the Face; Dermatitis Herpetiformis on the Wrist and Hand (an excellent plate); Chancre of the Vulva; and Purpura Hæmorrhagica of the Thigh. The contents of Part II. are Lupus Erythematosus of the Face; Hypertrophic Rosacea (interesting from its imitation of the leonine appearance of leprosy); Circinate Papulo squamous Syphilides on a profile; and Xanthoma Planum et Tuberosum (two figures representing the orbit and palm). Part III. represents Four Syphilitic Tongues; Dermatitis Herpetiformis in Concentric Circles on a Portion of the Trunk; Syphilitic Gummata of the Thigh; and Disseminated Epithelioma of the Face of Sebaceous Origin in Two profile Figures. All of them convey an excellent idea of the disease represented.

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*Diagnostique et Traitement des Tumeurs de l'Abdomen et du Bassin.* Par J. PÉAN, Membre de l'Institut de Médecine, Chirurgien des Hôpitaux. Tome troisième, avec 228 Figures intercalées dans le Texte. (*Diagnosis and Treatment of Tumours of the Abdomen and Pelvis.* By J. PÉAN, Member of the Institute of Medicine, Surgeon at the Hospitals. Third Volume, with 228 Figures in the Text.) Paris: G. Masson, Éditeur, Libraire de l'Académie de Médecine. 1895.

IN this volume, which consists of over 1000 pages, the author deals with the diagnosis and treatment of tumours of the uterus, of the Fallopian tubes, of the ovaries, of the round and broad ligaments, and of the pelvic peritoneum and cellular tissue. He has evidently used the word "tumour" in a broad sense, so as to include every form of swelling, whether produced by an actual growth, innocent or malignant, or by inflammatory processes. Thus, while we should, from the title of the work, naturally expect to find an account of fibroid tumours of the uterus and of cancer of the uterus, we are, perhaps, not quite prepared to find an account of chronic metritis and of syphilitic affections of the cervix. There is an interesting table of thirty-four cases of extirpation of the uterus for cancer, from which it appears that four deaths only resulted from the operation; but as regards recurrence, the cases, with one or two exceptions, had not been watched for a sufficiently long period to enable any conclusion to be reached as to the remote effects of the operation. The volume before us contains a great deal of information that cannot fail to prove valuable to those interested in the subjects of which it treats.

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## JOURNALS AND REVIEWS.

*Science Progress.*—The May number of this monthly review contains some very interesting as well as opportune papers. The first is by Dr. Frankland on The Past, Present, and Future Water-supply of London, being the discourse delivered by him at the Royal Institution on Feb. 21st. Dr. Frankland, as is well known, takes a very optimistic view of the future of London's water-supply. He concludes the present article in the following glowing terms: "Nevertheless, by means of storage, by utilising springs, by sinking deep wells, and by such comparatively simple means, we have, in my opinion, every reason to congratulate ourselves that for half a century at least we have at our doors, so to speak, an ample supply of water which for palatability, wholesomeness, and general excellence will not be surpassed by any supply in the world." In a paper on Atomic Weights by Alexander Scott, M.A., it is pleasant to learn "that that type of worker of whom we regard Stas as the chief is not yet extinct, in spite of the prevailing view that one must publish as many papers as possible in the least possible time before one can be said to engage in 'original research.'" Part 2 of the Stellar Theory is continued by A. G. Tansley, B.A., and Part 2 of The Present Position of the Cell Theory by G. C. Bourne, M.A. The volume concludes with a short paper on Ferns, Aposporous and Apogamous, by C. T. Druery, F.L.S.

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*Hospital Sunday Hymn.* By the Rev. W. SMALE, M.A., Vicar of St. Philip's, Kensington. The music by WARDEN

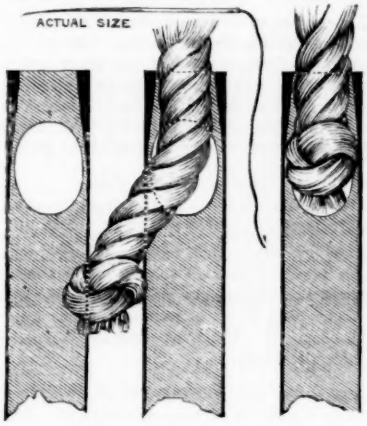
DENNIS. London: Novello, Ewer, and Co., Berners-street. Price 2*d*.—To those in need of a special hymn for the approaching Hospital Sunday services we can commend this. The music and words are well suited to each other and their theme.

# New Inventions.

## SURGICAL NEEDLE DESIGNED TO HOLD A SINGLE THREAD.

THE accompanying illustration shows a diagram of a section of a round needle, characterised by a central conical canal having its apex directed upwards, situated in the head beyond the eye. Fig. 1 shows the conical canal, Fig. 2 the knotted silk in process of threading, and Fig. 3 the knot *in situ*. To thread the needle. (*a*) Tie a simple knot in the silk as tightly as possible and cut off the loose end beyond the knot *flush with the knot*. (*b*) Thread from the eye towards the head. (*c*) Pull the silk until the knot is concealed within the central canal. The knot becomes wedged in the canal and cannot slip either up or down; it can, however, be easily pushed through the eye transversely with the point of a needle. There is no difficulty in threading with silk of a suitable size. The design has been carried out with great skill by Messrs. Lawson and Sons of Old Steyne, Brighton. The sizes[1] made are

FIG. 1. FIG. 2. FIG. 3.




from Size 6 of an ordinary sewing needle. This sized needle can take either fine silk or a horsehair; in the latter case the hair should be wetted and the thicker end passed through a flame to produce an olivary bead, which answers all the purposes of a knot. My object has been to produce a round needle especially adapted for peritoneal and cosmetic surgery. The advantages claimed are: 1. A single instead of a double thread. 2. The needle cannot slip off the thread. 3. Diminution of bulk at the eye, thereby producing the minimum of disturbance of the parts during the passage of the loaded needle through the serous coat or other delicate tissue. After use the needles should be dipped in hot water and put away threaded with dry silk.

W. D. CALVERT, M.R.C.S. Eng., L.R.C.P. Lond.
Brighton.

## A SOUND-POST STETHOSCOPE.

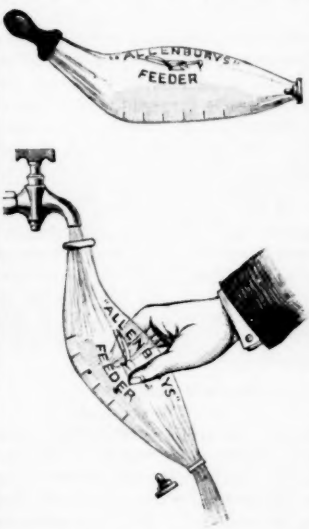
MESSRS. ARNOLD AND SONS of West Smithfield have made for me a stethoscope which I think conveys sounds from the patient's chest to the physician's ear more distinctly than the ordinary tube. This stethoscope is made on the principle of the sound-post which unites the belly and back of the violin represented by discs of wood or other material placed near the ends of a stethoscope tube; these vibrate and so convey

the pulsations which are ordinarily conveyed by the column of air. This stethoscope can be made at a price little exceeding that of the ordinary ones.

Fellows-road, N.W. H. FLY SMITH, M.B. Oxon.

## THE "ALLENBURYS" FEEDING-BOTTLE FOR INFANTS.

MESSRS. ALLEN AND HANBURYS, Limited, of Plough-court, Lombard-street, E.C., and Vere-street, Cavendish-square, W., have recently introduced an improved form of infants' feeding-bottle, which embodies several important advantages. The object of the designers has been to provide a bottle which shall admit of being easily and effectually cleansed in every part, and thereby freed from any suspicion that souring of the milk and digestive troubles on the part of the infant have been due to minute portions of milk inadvertently retained in some crevice. Perfect cleanliness was almost unattainable with the narrow glass tube, indiarubber tube, bone shield and teat of the old-fashioned bottle, but the present model, being open at both ends, can be easily washed at an ordinary water tap and thoroughly wiped or brushed inside. When in use one of the ends of the bottle carries the nipple, which is of smooth indiarubber and can be readily turned inside out for better cleaning. The other end of the bottle is closed by an indiarubber stopper containing a valve, which admits of air being sucked in behind the food as fast as the infant sucks the food out, so that the infant is not forced to strain in sucking and the teat has no tendency to collapse through the external pressure of the air. This bottle is said to be an improvement on one which is very widely used throughout the United States and also in France.




THE YORKSHIRE BRANCH OF THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this branch was held on June 2nd at Leeds, when Mr. W. H. F. Ramsden presided. The report showed that last year there were sixty-five members of the branch, of whom forty-eight were members of the parent society. During the session twenty members and two associates were elected, making a total membership of eighty-seven, which, however, is still but an inadequate representation of the health officers of so large an area as Yorkshire. In the evening a complimentary dinner was given to Dr. Whitelegge, late medical officer of the West Riding District Council, who has recently been appointed to the office of Her Majesty's Chief Inspector of Factories.

[1] This figure of the actual size in printing comes out much too bulky, being in reality about half the size.

# Analytical Records
FROM
# THE LANCET LABORATORY.

### TABLOIDS OF (1) EFFERVESCENT BITARTRATE OF LITHIA; (2) EFFERVESCENT CITRATE OF LITHIA; (3) PANCREAS SUBSTANCE; AND (4) MAGNESIUM SULPHITE.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL-BUILDINGS, E.C.)

IT is evident from the important additions that are made from time to time that new remedies are not meant to be excluded from the "tabloid" list. The above are examples of recent useful additions. The first (bitartrate of lithia) have been prepared with the view of providing a convenient and reliable means of administering the bitartrate which it is suggested increases the alkalinity of the blood, eliminating uric acid. The fate of bitartrates in the organism or other organic salts, as citrates and malates, is similar, of course, to that when these salts are burnt, a residue of carbonate of the alkaline metal is obtained. Effervescent lithia citrate tabloids are prepared with a similar object in view. They are agreeably effervescing, and it is suggested also that they may prove useful when dissolved in an ounce of water as an external application to gouty swellings. Pancreas substance tabloids represent, it is stated, the whole substance of the gland in a pure reliable form, and contain the active principles in an unchanged state. They are keratin-coated to ensure the passage of the pancreas substance through the stomach unchanged to the alkaline digestive tract. Pancreas substance, as is well known, has been administered with marked benefit in diabetes mellitus, an effect which is "produced by the artificial supply to the blood of a principle (produced by the epithelioid tissue of the pancreas) which profoundly modifies the carbohydrate metabolism of the tissues." Magnesium sulphite was suggested some time ago as of service in disinfecting and destroying the membrane in diphtheria. In the form of tabloids it may conveniently be sucked, the salt gradually decomposing, giving rise to free sulphurous acid (which is very obvious in the mouth) and probably hydrated magnesic oxide.

### COFFEE AND CHICORY ESSENCE.

(BROMLEY AND CO., BLOOMSBURY WORKS, LEEDS.)

This is avowedly a mixed extract, its solution in hot water possessing a good rich aroma and "body." Distinct evidence of its genuineness and value was afforded in the fact that on suitable treatment crystals of caffeine, the important stimulating principle of coffee, were extracted from it. It is free from objectionable admixtures.

### PEARL OLD IRISH WHISKY.

(MARGRAVE BROTHERS, BRIDGE-STREET, LLANELLY.)

The general characters of this manifestly pure spirit give evidence of skill and experience in blending. It possesses the taste and aroma peculiar to Irish whisky, and presents on analysis the composition of a well-matured product. The results were as follows: alcohol, by weight 39·80 per cent., by volume 49·13 per cent., equal to proof spirit 82·59 per cent.; extractives, 0·37 per cent.; mineral matter, 0·005 per cent.; acidity reckoned as acetic acid, 0·024 per cent. It is a wholesome spirit and practically free from acidity.

### MEDICINAL TOKAY WINES.

(FRN. STEIN, AGENCY, W. BEST AND SONS, 22, HENRIETTA-STREET, CAVENDISH-SQUARE.)

The well-known Tokay wines of Hungary have long been accredited with peculiar properties. They do not appear to disturb the digestive functions as is the case with wines containing a marked amount of astringent substances, while their very distinctive flavour, thin, sweet, and delicately aromatic, is an attractive feature. According to our analysis and examination this is true of the specimens before us, which are undoubtedly genuine and pure. The following results were obtained:—Medicinal Tokay Sweet (2*s.* 9*d.*): extractives, 18·94 per cent.; mineral matter, 0·32 per cent.; alcohol, by weight 13·69 per cent., by volume 16·89 per cent., equal 29·60 per cent. proof spirit. Medicinal Tokay Dry (3*s.* 3*d.*): extractives, 16·84 per cent.; mineral matter, 0·24 per cent.; alcohol, by weight 12·92 per cent., by volume 15·96 per cent., equal to proof spirit 27·97 per cent. Medicinal Tokay Sweet, extra fine (4*s.* 6*d.*): extractives, 27·26 per cent.; mineral matter, 0·46 per cent.; alcohol, by weight 12·15 per cent., by volume 15·02 per cent., equal to proof spirit 26·33 per cent. Medicinal Tokay Red, sweet (3*s.*): extractives, 7·78 per cent.; mineral matter, 0·1 per cent.; alcohol, by weight 13·85 per cent., by volume 17·08 per cent., equal to proof spirit 29·92 per cent. They are all excellent types of this peculiar wine, the properties of which render it of especial value in suitable cases.

### SAVAR'S COCA WINE.

(EVANS, LESCHER, AND WEBB, 60, BARTHOLOMEW-CLOSE, E.C.)

This is a concentrated and permanent spirituous solution of the leaf of erythroxylon coca, which is useful for the extemporaneous preparation of coca wine. It may be taken in dessert-spoonful quantity in half a wineglassful of water or wine before meals, and after a time in double quantity. Each large bottle is stated to contain the active principles of about 2000 leaves, so that a quarter of an ounce would be the equivalent of twenty-five leaves. The wine is marked by the peculiar leafy flavour of the plant and yields an abundance of cocaine when suitably extracted. It is evidently a reliable and a standard preparation, which enables the practitioner to prescribe with confidence an exact dose of the restorative principles of the plant.

### LIEBIG'S MALTED FOOD.

(W. M. BELL, 2, MALVERN-ROAD, WEST KILBURN.)

Treatment both by malting and cooking has evidently been the process by which this food has been prepared. It contains a large proportion of soluble carbohydrates including dextrine and malt sugar. The taste is pleasant, and there can be little doubt of its nutritious as well as of its digestible character. Moreover, it contains an excellent proportion of mineral food.

### MAGGI'S CONSOMMÉ.

(COSENZA AND CO., 95 AND 97, WIGMORE-STREET, CAVENDISH-SQUARE.)

Apart from the convenience of the form of this preparation, consisting of concentrated meat essence contained in gelatin tubes enclosed in gelatin capsules, it possesses real nutrient as well as stimulating properties. Alcohol gives an abundant precipitate of peptoniferous matter, whilst the crystalline meat principles are found in solution; albumin also occurs to an important extent and is thrown down on boiling the solution of the contents of the cartridges after the addition of a few drops of acetic acid. Each tube makes three-quarters of a pint of nearly clear broth of good beefy flavour with a *soupçon* of spice and salt, which add to its palatability. The capsules should prove of great service and convenience in the invalid's dietary, whilst affording also an easy means of extemporising a really good *consommé*.

### ROYAL BAKING POWDER.

(WRIGHT, CROSSLEY, AND CO., 17, NORTH JOHN-STREET, LIVERPOOL.)

It is sufficient to record that this powder on analysis was found to be free from objectionable ingredients, and especially alum. On moistening a copious evolution of gas was given off. It is therefore a good and wholesome yeast substitute.

# THE LANCET.

*LONDON: SATURDAY, JUNE 6, 1896.*


IN entering to-day upon a second decade of Special Supplements in support of the Metropolitan Hospital Sunday Fund we feel that we may dispense with the language of apology which was appropriate to our earlier issues of this kind. We address ourselves in this chapter to a body of readers wholly outside the circle of those to whom, as a rule, we submit our weekly issues. But it is by this time well understood on the part of our readers, both medical men and laymen, that we make this departure from our custom in the interest of a cause which is the common cause of all alike; in the interest of a great work of charity which, as being directed to the relief of the ravages occasioned by personal accident and by disease, is in a peculiar sense dependent upon medical support, but which, by reason of the magnitude upon which its operations are conducted, goes much beyond the power of any particular class in the community, and demands and receives the support of the great public, including rich and poor, great and small—everybody who can help with a pecuniary contribution or with personal service. We mention personal service in this connexion because, although pecuniary aid is in a special sense the form which charity takes on Hospital Sunday, it would be less than charity if the personal element were wanting which mere pecuniary support can never replace. Of the many thousands who on Sunday next will testify to their interest in hospital work by larger or smaller contributions to the Hospital Sunday Fund collection a very small percentage only will be capable of contributing anything but money to the great work. And yet those whose personal service is one of the wings upon which this great charity supports its flight will by no means be found to hold aloof from the voluntary tax to be then decreed by an unqualified universal suffrage upon Londoners. From the hospital physician to the hospital drudge every class and grade in the ministry of the hospitals will be found represented in the congregations of the metropolis and contributing in proportion to its means to the pecuniary support which constitutes the second wing of medical charity. The blessedness of giving in this most literal sense of the word is a delight for which those whose chief blessedness is in doing will be in no sense backward to compete. But the gifts of money must chiefly come from those who have nothing else to give, and the fact that they are thus shut up to this one form of helping the great work forward should act, and will act as we believe, as a powerful incentive to generosity.

In the statement which we to-day issue—a statement which rests more than some others that we have submitted upon the purely public aspects of the question—we have endeavoured to show in some detail how the existing organisation of the Fund supplies the want of a coördinating and governing body among the voluntary medical charities of the metropolis, and to display the extent, as measured by pecuniary support, to which the individual members of the public interest themselves in this annually recurring function. To many, perhaps to most, of our readers both of these views of the subject will disclose some very striking facts. It will scarcely be less than a revelation that the churches of the metropolis, upon this, the occasion when they make their supreme effort in the cause of philanthropy, cannot secure so much by way of contribution as a farthing a head from Londoners all round. It will be perhaps equally surprising, but in a more agreeable sense, to learn how much is done quietly—so quietly that it may fitly be said to be without observation—to secure the vital objects of economy and efficiency in connexion with hospital administration. At a minimum of cost for official work, with a minimum of trouble and offence to the institutions whose work comes under review, the control of the Council is exerted over practically the whole medical charity of London. Two great hospitals, monuments of the piety of an earlier day, are able to maintain their work without subventions from the Fund, and a few obscure institutions are not able to qualify for a share in its distribution, but these are the most notable exceptions to the rule that through the instrumentality of this great institution the influence of the church is brought to bear upon the work of medical relief with what are, upon the whole, the most beneficent results.

This popular control is not, it must be admitted, wholly without its drawbacks. But nothing is; and the worst that can be said about the spontaneous Hospital Sunday movement is that it has given occasion to a few mistaken people to thrust their views very unpleasantly forward in a singularly unprofitable or even mischievous way. We have ourselves become involved within the past week or two with certain people quite unknown to us who, probably with the best intentions, have sought to turn this collection into an occasion of strife concerning the ethics of physiological experiment. This, like many other questions of morals, is one upon which it is quite possible to be mistaken, and we do not for a moment question the integrity of those persons who, entertaining strong views, assail with unmerited vituperation the leaders of physiological research. To be misunderstood and misrepresented has been the fate of those who have led the van in every work of charity, from the Founder of Christianity downwards through all the ranks of the benefactors of mankind. He would be unworthy of the position of a pioneer in any department of human progress who was not prepared to face misrepresentation at the hands of those who know ill though they mean well, and to encounter the unreasonable hostility of good but uninstructed people. The pathologist who knows what momentous issues in the way of the mitigation of suffering and the saving of life both to men and brutes lie in the successful modification of a bacterium, or the production of a benignant amœboid growth, cannot possibly desist from his work of mercy merely because some of his neighbours, whose good opinion he would gladly enjoy, mistake him for a monster of cruelty. He cannot justify himself to their judgment for the same reason for which the ordinary practitioner could not, if he would, justify to his patient his treatment of a particular disease. Practical experience has taught people gifted with common sense that in order to discuss a

medical question with profit a preliminary medical education is necessary, and they act accordingly. They place their personal interests unreservedly in the hands of some medical man in whose knowledge and integrity they have confidence, and they say to him: "Treat us according to your lights; the details we leave to your better judgment." The position of the pathologist is analogous. He occupies himself with the larger interests of classes and populations and species rather than with those of individuals, and therefore his methods differ from the methods of the general practitioner; but in this case, no less than in the simpler case where the individual is alone concerned, whosoever would profitably discuss the mode of procedure must be prepared to submit first of all to the preliminary scientific education. Apart from this condition it must be matter of pure chance whether his conclusions be sound or unsound, for his mind is not accessible to the only relevant arguments.

It is, therefore, the necessity of the case and not pique which makes us refrain from the attempt to vindicate our character against the aspersions which have been cast upon us in connexion with the work of physiological research. That this patient endurance of misrepresentation and obloquy must injure us in the eyes of some among our neighbours we fully recognise; but though we regret the fact, we recognise that such regrets are futile, for it cannot be helped. It is the result of invincible ignorance.

But very different considerations arise when we find that an attempt is being made to make the region of medical charity the battlefield of this polemic. A circular to which we drew attention last week has, by suggesting that the hospitals might be placed in a difficulty, which would soon become intolerable, if a concerted movement were set on foot to make the suppression of physiological research a condition of the churches' contribution to their funds, has placed the matter in a very different light. We quite admit that if any section of the charitable public chooses to press a point with fanatical insistency it can make coöperation impossible, and that the multiplication of such grounds of difference would very speedily dissolve the great organisation which the patient labour of the past one-and-twenty years has so happily built up. That views, mistaken views, strong views, should be entertained does not surprise us; we do not complain that they should be bitterly expressed. All this, though unwelcome, is but wholesome human nature. But when one set of conscientious people denounce another set of people equally conscientious with the unmeasured violence of the circular, and in furtherance of the views they chance to hold would stay the hand stretched out to tend the sick and succour the dying—and this *in order that the cry of the suffering poor may become unendurable—then* our patience gives way. Then it becomes our duty to cry to them "Hands off!" and to denounce them to all honestly charitable folk as people whose misguided conscientiousness is itself of the nature of a vice, since it cloaks and gives respectability to conduct purely mischievous—conduct which would, if it went unchecked and attained its ends, accomplish the most cruel and enormous harm.

But this will not be. In the work of collecting and administering the Hospital Sunday Fund the churches have shown an unprecedented—may we not say an unsuspected—power of sinking points of difference and subordinating to the ends of practical charity all the influences which tend to hamper or to frustrate their coöperation. The results of this most beneficent concert have furnished us with the theme of our Supplement to-day, and we have confidence alike in our fellow workers and our cause—a confidence which forbids us to entertain any misgiving on this point or to doubt that, having once joined hands and forces in such a sacred cause, the churches of the metropolis and those who represent them in this matter will suffer anything to distract their attention from the great body of suffering which it is their special function to relieve, or to paralyse their efforts by fruitless bickerings and unprofitable discussion.

Upon a comparison of the diagrams showing the growth of London during the past five years with the article which appears in another column upon the results of the recent census, it will be seen that the figures adopted in the Hospital Supplement article are not perfectly correct. New London is made to represent a population of 221,000 instead of 199,528, as it should have been. The article in question was written and the blocks were prepared in advance of the publication of the figures, and being partly based on estimates have turned out a little wrong. The error, although considerable enough to demand mention, is not of a magnitude to affect the argument in any way, or even visibly to alter the dimensions of the figure which represents New London in the woodcut.

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NEVER perhaps before in the course of history has a more pathetic and awful example of the aphorism *memento homo quia pulvis es* been recorded than in the news received recently from Russia. Amid all the pomp and majesty by which the blend of Orientalism in the Russian character is so marked the young Emperor had been inducted into the full possession of his sovereignty. The Church had declared the Divine blessing upon his head and from all parts of his vast Empire had come elders, heads of tribes, and deputies of all kinds to testify by one act their rejoicing and their willingness to be his men. Everywhere was pleasure, gratitude, and joy. Two days after "all was in the dust," and in place of rejoicing there was mourning.

That even the humblest classes might say that they had had a share in the general distribution of presents and gifts a dole had been arranged for consisting of sausage, cake, sweets, &c., and these were to be distributed on the Khodinsky plain. A row of wooden booths with barriers had been erected and from this centre the distribution was to be made. The crowd began to assemble upon Friday night, and upon Saturday morning one of those uncontrolled and blind impulses by which crowds are sometimes affected if left to themselves came upon the mass of people. They pushed irresistibly forward, and when the foremost ranks were checked by the barriers the hindmost continued their advance, with the result that some two thousand persons were crushed to death. There is no need here to go into the horrors of the scene or the heart-rending incidents which have already been fully reported in the daily press. Suffice it to say that the gloom which

the disaster has cast over the land is unparalleled, for such a catastrophe, lamentable at any time, becomes doubly so when we contrast it with the circumstances which in a way led up to it. With whom the responsibility rests is not very clear and probably will never rightly be known. It is always easy to blame, especially after the event, and presumably the authorities were not so much wilfully careless as worn out. A crowd as large as this was—for though the numbers vary in different accounts it obviously was enormous—is almost impossible to control after it has collected. It must be broken up during the process of aggregation and kept moving. Stagnation means pressure and pressure means death. If twenty or thirty different distribution centres had been arranged, and if the crowd had been broken up as it was collecting all would probably have been well.

That a crowd should assemble in such numbers and should become so out of hand for so small a dole as a sausage, a cake, and a tin mug may seem extraordinary, but to anyone who knows the Russian character the course of events will appear plain. The gifts were the gifts of the Czar; the tin mug has his portrait upon it, and the absolute devotion of the Russian peasant to the "Little Father" is a thing that no one who has not seen it could believe. To the peasant the Czar is everything. He is the head of the Empire, the head of the Church, the father, friend, and protector of his people. In every cottage his portrait hangs and is looked upon with almost the same reverence as the sacred "Eikon," and it was this feeling that urged the vast mass to what proved to be the death of many. For the relatives of the dead we grieve; with the officials whose duty it was to control the crowd we deeply commiserate; but especially for the young ruler whose position, responsible and burdensome at all times, has had added to it an additional sorrow by the death struggle on the Khodinsky plain, our sympathies are of the deepest.

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THE sixtieth session of the General Medical Council commenced on Tuesday last in the new council chamber. The time of the first day was largely occupied by an address from Mr. T. PRIDGIN TEALE urging his colleagues to consider the present condition of medical examinations. His speech in support of his resolution will be found printed at length at the commencement of this issue, p. 1547. We have so frequently urged that our medical examinations are too numerous and often unjust in their incidence on the candidates that we are pleased to see that the General Medical Council has considered the matter from a practical standpoint. No one is better qualified than Mr. TEALE as a teacher, inspector of examinations, and practical surgeon to urge the importance of this matter. Practically we have to admit that the students who are studying for an entrance into our profession are over-examined, and that many of the examinations are so conducted that they cannot possibly do justice to the individual candidate. The greater the number of examinees the greater is the certainty of such injustice. With a time-limit this injustice is absolutely assured. If examinations are increased in number the injustice becomes more pronounced in a strict ratio to the sub-divisions of the various examinations.

There are only two really substantial reasons for examining a medical student or any other professional student, and these should always be most held in view by the authorities who have charge of his professional education. The first of these is to see that he is sufficiently well acquainted with the subjects of preliminary education to enable him with advantage to pass on to the study of the technical requirements necessary for him to practise the daily work of his profession. The second is, of course, to see that he has learned his work sufficiently well to enable him to practise with benefit to the public. With regard to the first, is the present guarantee in preliminary education a sufficient one? We allow that the standard has been much improved in recent years by the insistence on the passing of the preliminary subjects *en masse* instead of in detail, as was formerly the case; but even now the standard could be raised with advantage. It is at this end that the unfit should be stopped. The student who is bound to extend a five years' education into one of seven, or even more, years should be peremptorily barred. A proper course of education extending over four years is amply sufficient for a well-educated man to become conversant with the theory and practice of medicine, surgery, and midwifery, and, therefore, to take his place in our ranks as a properly qualified medical practitioner. As Mr. TEALE shows, this does not now take place, and even after a five years' curriculum some 30 to 40 per cent. fail to pass. The multiplicity of examinations in different subjects to which every individual student is subjected, and for which, as well as for the preliminary education, the General Medical Council is responsible, is the main reason for their heavy percentage of rejections. It is to this question that Mr. TEALE has devoted his attention, and his speech and his suggestions for decentralisation must have every consideration from the teachers and examiners as well as from the members of the profession in general. In 1861 medical students were rejected at the rate of 12·4 per cent.; in 1892 at a rate of 39·3. Meanwhile, the standard of medical preliminary education has steadily advanced. Do these statistics mean that the present medical student is to the extent of more than one in three inferior in professional knowledge to his predecessors of thirty years ago? Unquestionably not. But what they demonstrate is that the sub-division of examinations has increased more than threefold the chances of his failure at some part of his career. (Is it to be wondered at that with these statistics the main idea of all is to "get through," and to secure this event by "cram, cram, cram"?) The clinical examination of the students is, by most examining boards, the least considered and the least thorough. The plan which Mr. TEALE suggests for the improvement of the present mistaken system is one of *decentralisation*, and we are glad that he has not only attacked existing evils, but has suggested a remedy which seems to us fairly adequate. "We must unload our public examination," says Mr. TEALE. "We must relegate to the schools not only to teach, but to examine and to certify in all secondary subjects, such as elementary biology, materia medica, pharmacy, hygiene, perhaps even

chemistry, and certainly forensic medicine. Then let *all the rest* be covered by three public examinations—one in anatomy and physiology, presumably at the end of the second year of professional study; one in pathology and therapeutics at the end of the fourth year, and the clinical examination in medicine and surgery, together with examination in midwifery (truly in midwifery, not in fancy gynæcology) at the end of the fifth year. Surely after that we may see the ten minutes' bell and all it implies abolished. The licensing bodies will be able to afford to examine more thoroughly, less hurriedly, to find out what a student really knows and to re-examine those on the border line of pluck or pass. Then, when plucking examinations are reduced from nine to three and become less matters of chance, there will be some room for calm clinical study, for self-training, for learning something during studentship of that very important and terribly neglected better half of the training of a true medical man, the knowledge and observations of a human being."

We are almost entirely in accord with Mr. TEALE in his recommendation. In our opinion examinations in elementary biology, chemistry, and physics should be left to general and not professional examining bodies. The student should be registered on entering on the study of either of them and be allowed one year out of the five on passing these subjects, which should not be allowed to hinder his purely medical routine. It would be the duty of the General Medical Council to schedule in official manner the examining bodies whose certificates in these subjects would be considered adequate. In the other four years, which should be strictly devoted to a technical curriculum, the student cannot do better than follow Mr. TEALE'S advice, to which we refer him, and the sooner the examination system is altered on the lines of his remarks the better will be the training of the medical student and the greater the advantage of his education to the community.

# Annotations.

"Ne quid nimis."

## THE COMING ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

NOTICES, dated June 2nd, have been issued by the Secretary of the Royal College of Surgeons of England that "a meeting of the Fellows of the College will be held at the College, in Lincoln's-inn-fields, on Thursday, the 2nd day of July, *at 1.30 o'clock in the afternoon precisely*, for the election of three Fellows into the Council of the College." Intending candidates are informed that blank forms of the requisite notice from a candidate and of his nomination may be obtained on application to the secretary, and the same must be received by him, duly filled up, within ten days from the date of the circular—i.e., *not later than on Friday, the 12th day of June next*. A voting-paper will be sent by post to each Fellow whose address in the United Kingdom is registered at the College on Monday, the 22nd day of June next, and Fellows will not be required to apply for voting-papers. The vacancies to be filled are created by the retirement of Mr. Bryant, Mr. Cadge, and Mr. Pick on the completion of the full eight years' term of office. Mr. Bryant and Mr. Cadge were first elected in 1880, and have therefore each served for sixteen years or for two full periods of eight years consecutively, both having been re-elected in 1888. Mr. Bryant, who has passed the chair, is the representative of the Council of the College on the General Medical Council of Education and Registration, and will stand again. Mr. Cadge does not intend to do so. Mr. Pick, who is one of the Vice-Presidents, and has only enjoyed one full term of eight years as a Councillor, will naturally offer himself for re-election. We have not yet before us the names of all the other intending candidates, and, therefore, defer further comments till the list is officially complete. It may be noted that as there are no death vacancies this year the number of vacancies is three—the usual number of vacancies by rotation. Next year, in the absence of any death vacancies, the number of vacancies will depend upon the re-election or not of Mr. Christopher Heath as President of the College. Mr. Heath's second term of eight years on the Council expires next year; but if he is re-elected President he will not retire, a clause in the charter expressly providing for this contingency.

## "PROTEST AGAINST THE INJUSTICE OF THE MEDICAL AUTHORITIES."

UNDER the above heading we published in our issue of March 21st some remarks reflecting on the action of Dr. J. B. Crozier in issuing a card intimating, amongst other things, that he would see patients whose income was under £2 a week at a certain scale of fees. In our issue of April 4th we published a letter from Dr. Crozier explaining his position. The matter came to the knowledge of the Royal College of Physicians of London, and that body, after due consideration, have informed Dr. Crozier that "they gladly accept his explanation and consider it satisfactory." While we are fully in sympathy with Dr. Crozier's grievance and also agree that a ready money fee, however small, from a poor patient is better than the club or contract system, we still think his method of drawing attention to the matter was a mistaken one. We recognise, however, his *bona fides*, and are glad to see that the Royal College of Physicians of London have accepted Dr. Crozier's view of the matter.

## HORSEFLESH AS FOOD.

PRIVATE opinion may be allowed to decide what is agreeable to the palate, but wholesomeness in diet cannot be regulated by the same flexible standard. Certain statistics recently published in connexion with the Belgian trade in horseflesh are interesting as bearing on this subject. From these it appears that about 6000 horses were exported last year from this country as part of the food-supply of the poorer classes in Belgium. Most of these were old and wretched animals and, what is of much greater consequence, a certain proportion were affected with glanders. Such evidence of mismanagement as these facts afford has naturally attracted the attention of the Belgian Government, who have accordingly taken steps for the better supervision of the horse traffic, and especially for the detection of glandered animals. As a preventive makeshift this arrangement is no doubt reasonable and convenient. No one can pretend that it satisfies the conditions necessary to healthy nutrition, for we cannot suppose that it will do more than condemn the carcases of animals which are actually diseased. Until the horse is reduced by the general employment of mechanical motors to the state of a mere lounger like the pastured ox we need not expect that any but maimed or superannuated animals will contribute materially to the food-supply of a poverty-stricken population. Bad at the best will be, for a long time to come, the sinewy meat provided by the horse-butcher. It is clear that under such conditions thorough

supervision by capable veterinary officials is alone compatible with public safety. It appears to be taken for granted that all this inferior horseflesh is consumed in Belgium itself. There have been suggestions notwithstanding that this is not the case. In consideration of certain disquieting rumours which have been set afloat in the British press we would suggest as a highly proper and legitimate subject of inquiry for the official supervisors of *abattoirs* the question, How much of this meat, if any, returns to the British Islands, and under what name?

## THE DEATH OF SIR GEORGE JOHNSON.

WE deeply regret to announce the death of Sir George Johnson, M.D., F.R.S., Physician Extraordinary to Her Majesty the Queen, which occurred at his residence, 11, Savile-row, on Wednesday afternoon last, June 3rd. The deceased gentlemen, who was in his seventy-eighth year, had been in excellent health up till Monday, but on returning from a drive on that afternoon he had a hemiplegic attack, from which he never recovered. We shall give an extended notice of Sir George Johnson's career in our next issue.

## COMPARATIVE PAUPER STATISTICS.

IT is satisfactory to be able to record a continued decline in pauperism, as shown by the monthly comparative pauper returns issued by the Local Government Board. We have before us the return for the month of March, and we find that in all the several divisions of the country there has been a decline in the amount of pauper relief as compared with March of 1895, and that this is true of each week of the month. Certainly it is said that the present year has had freedom from the severe frost prevalent in February of last year and which was of a character to have an influence on the March pauper data as well as those of February. At the same time the figures are encouraging. In London as regards the first week the decline was as much as 22·0 per cent. on the corresponding week of March, 1895, and 15·0 per cent. in the closing week. In England and Wales the rates of decrease in 1896 as compared with 1895 were 9·5 per cent. in the first week, 7·9 per cent. in the second week, 6·3 per cent. in the third week, and 5·7 per cent. in the fourth week. In proportion to population the rate per 1000 in the last week of March this year was lower than in any of the years 1857–95, except the four years 1891-94.

## THE LAY REPORTER AT CORONERS' INQUESTS.

OBSCURE and unusual cases are always worth recording in their proper place, but the details of inquests which often find their way into the daily press serve little end but the satisfaction of a morbid craving on the part of the public. Capital is too frequently made out of details which are exceedingly inaccurate, and a very false impression may be created in the mind of the public. In more than one of our evening contemporaries paragraphs appeared last week relating an "extraordinary death" which occurred at St. Bartholomew's Hospital as the result of drawing a tooth. From these we might gather that the patient, a girl aged fourteen years, went to the hospital, had the tooth extracted, was detained, and died suddenly in hospital the next day from rapid inflammation of the brain which had escaped the diagnosis of the physicians under whose care she was. Inquiry shows that the case was indeed an obscure one and remained so. After the extraction of the tooth the girl went home, became ill two days later, and was admitted to the hospital on the third day in a nearly unconscious condition and with severe constitutional symptoms. She developed risus sardonicus and chronic convulsions, and later in the day tonic convulsions and opisthotonos, with intervals of complete relaxation. No definite diagnosis could be made, though tetanus and strychnia poisoning were duly weighed. She died suddenly during the night after admission, and the necropsy showed merely intense congestion of the brain, doubtful indications of meningitis, and some minute recent vegetations on the mitral valve. The coroner ordered no examination of the contents of the stomach, though these had been reserved. Cases such as this are by no means unknown and have baffled the diagnosis of many physicians, but no good end is served by dishing them up inaccurately for the lay press.

## A JENNER RELIC.

THE immortal Jenner was a many-sided man, but outside the profession he is best known as "the man who invented vaccination." An interesting relic of this "person" of Jenner has been presented to the Royal College of Surgeons in the shape of Jenner's silver lancet-case and lancets. The donor is Mr. E. Wadams of Great Malvern, and the relic was presented to him by an old patient whose grandfather was Jenner's assistant. This case bears Jenner's initials and the lancets his name, and it can be seen in the Museum of the College along with the other Jenner relics.

## COÖPERATIVE EDUCATIONAL TRAVEL.

THE following is a portion of the title page of a pamphlet sent to us by a correspondent: "Coöperative Educational Travel, by Henry S. Lunn, M.D., B.Ch., Fellow of the Medical Society of London; and J. T. Woolrych Perowne, M.A., late Classical Scholar, Corpus Christi College, Cambridge." Truly times have changed. In old days people never started on a journey with the idea of being educated. Of course, if they travelled in a proper manner they were educated, but the primary objects of travel were either to visit the Holy places, or amusement, or both. Of pilgrims in the first sense there are many examples. Early travellers for travel's sake are rare, but a notable instance of the combined pilgrim is the astounding liar who wrote the immortal travels of Mandeville—if, indeed, he ever travelled at all. Somehow the title "Educational Travel" takes away the romance of travel. It savours too much of those educational games which appear at intervals—and to judge by this prospectus, everything is made far too luxurious. Roughing it is half the pleasure of travelling. To show what an old time journey was like—a journey undertaken when a pilgrimage was a real act of a very lively faith—we recommend a perusal of a little-known work, an "Evagatorium" by Brother Felix Fabri, to the writers of the pamphlet. It is not written in good Latin, but is full of wisdom. He quotes a remark made by a "prudens Comes" to the effect that the journey to the Holy Land "nimis fore periculosam illis, qui levitate ducti, aut curiositate, aut seculi pompam, aut quandam vilem ac transitoriam vanitatem, finem ejus præstituerint." Now hear the pioneers of coöperative educational travel:—

"*The twenty-one guinea cruises.*—For the sake of clergymen who can only spare three Sundays from their parishes and professional men whose busy life will not allow a longer vacation we have planned two short cruises to Palestine and Egypt, calling at Sicily and Malta, which will afford the opportunity of a brief visit to the Holy City and the Pyramids to those to whom it would not otherwise be possible. The days of rest on the steamer will obviate any sense of hurry, and the time allowed for Jerusalem and Cairo is long enough to give opportunity for treasuring up never-to-be-forgotten memories of historic scenes."

The *Midnight Sun*, the chartered steamer, is indeed a floating palace. We quote from the prospectus:—

"The s.s. *Midnight Sun* is one of the finest pleasure yachts afloat and is a magnificent steamer of 3188 tons register and

3500 horse-power. Her passenger accommodation is exceptional. All cabins on the main deck are fitted up with large port-holes. The steamer is lighted throughout with electricity and fitted with electric bells. There are numerous hot and cold water baths for ladies and gentlemen, and all the cabins are supplied with hot and cold water. The majority of the cabins are arranged for two persons only and there are no upper sleeping berths, all berths being on the same level opposite each other. The dining saloon is eighty feet in length, and there is a smoking-room on the upper deck which will seat 100 people. There is also a drawing-room and music saloon, and a ladies' sitting-room on the upper deck. The steamer's launch is placed at the service of the passengers in the ports. The fare: ..... coffee and biscuits in the early morning, breakfast, lunch, afternoon tea, dinner, coffee after dinner, tea, at 8.30 P.M. All these meals are maintained while staying in port. A dark room is provided for the use of amateur photographers."

Brother Fabri, who had no ideas of coöperative education, went in a very different way. We cannot quote his account of the galley, but if the pamphleteers will read his chapter, "De inquieta dormitione peregrinorum in navi," they will see what a pilgrimage used to be like. "Multis noctibus fui, quod nunquam clausi oculum," says the unhappy Fabri.

## PROSECUTIONS UNDER THE DENTISTS ACT.

THE *Western Mail* of May 23rd reports that two men have been fined at Newport (Mon.); the one, Walter Frederick Joll, for "unlawfully taking and using the name, title, addition, or description of dentist." One witness testified that the defendant at Messrs. Goodman's consulting-room said he was a dentist and drew a tooth for him (the witness). The offence was admitted and an undertaking given that it should not recur. A fine of 40*s.* and costs was imposed. The name of the other defendant was Moses Abel. He described himself to one of the witnesses who applied to have a tooth stopped as "a qualified dentist." The defendant's counsel, Mr. C. J. Jackson of Cardiff, tried to show that it had not been proved that his client used the title of dentist and that the witness called had been merely sent to entrap him. The evidence showed that the defendant had been fined on a previous occasion for practising as a dentist and advertising himself as such. The magistrates considered the case proved and inflicted a fine of £5, with the alternative of twenty-eight days' imprisonment. The magistrates declined to state a case.

## THE BACTERIOLOGICAL DIAGNOSIS OF MALARIA

IN the May number of *Archives de Médecine Navale et Coloniale* Dr. du Bois Saint-Sevrin has a short paper on the best way to identify the presence in human blood of the parasite which M. Laveran regards as the exciting cause of malarial fever. Dr. Saint-Sevrin, who is Professor of Bacteriology in the Naval School at Toulon, believes firmly in the specific character of the alleged hæmatozoa and, manifestly ignoring some recent developments, even goes so far as to assert that for some years the fact has not been seriously contested. He thinks that the reason why so many conscientious observers fail to find the parasite is because they follow defective methods of research, being misled by their habitual guides. The writers of treatises on microscopical procedure, while correct for the most part, nevertheless copy each other in perpetuating certain erroneous indications which tend to lead neophytes away from the proper path. For example, they all maintain that the patient whose blood is to be examined must not have taken any quinine for a considerable period, but in upwards of 100 cases all taking the alkaloid Dr. Saint-Sevrin never once failed in demonstrating the specific agent. It is essential, however, that the blood for examination should be drawn at the commencement of a malarial paroxysm. Another erroneous indication consists in recommending the employment of fresh blood without the use of staining re-agents. It is true that by this method alone can the flagellated bodies be demonstrated; but these, though academically interesting, are not essential from a diagnostic point of view. The small, recently developed bodies almost entirely free from pigmentation are what we have chiefly to depend upon for purposes of identification, and even with experienced observers there is often great difficulty in detecting them when staining material is not employed. During the period of apyrexia in a patient who is taking quinine regularly the hæmatozoa, as a rule, cannot be demonstrated in peripheral blood; they only make their appearance on the advent of a febrile paroxysm. The writer endeavours to account for this by the hypothesis that the parasites are momentarily lodged in the spleen, but the explanation is scarcely all-sufficing. Dr. Saint-Sevrin's paper, which is illustrated by an admirable coloured plate drawn by M. Boyer, terminates with the following conclusions:—1. Double staining with eosine and methylene blue constitutes the most favourable procedure for a rapid examination of paludal blood. 2. Canada balsam forms the best mounting for preserving the preparations. 3. Bacteriological examination should invariably be undertaken in all doubtful febrile cases. 4. In many cases prognosis and treatment cannot otherwise be established.

## THE FUNERAL OF SIR J. RUSSELL REYNOLDS.

ON June 2nd the funeral of the late Sir John Russell Reynolds took place at Owlpen, Gloucestershire, the first part of the burial service being read at St. Peter's, Vere-street, by the Rev. Prebendary Harry Jones and Canon Page Roberts. Lady Russell Reynolds attended with the Rev. Dr. Henry Reynolds, elder brother of the deceased, as chief mourners. There were present, in addition to the late baronet's relations, General H. Lynedoch Gardiner, representing Her Majesty the Queen; Sir R. Quain, President of the General Medical Council, and Mr. Wheelhouse, representing the General Medical Council; Dr. Samuel Wilks, President of the Royal College of Physicians of London, and Mr. Christopher Heath, President of the Royal College of Surgeons of England, while these bodies were further represented by Sir Dyce Duckworth, the Treasurer, and Dr. Edward Liveing, the Registrar, of the Royal College of Physicians, and Mr. Reginald Harrison, Senior Vice-President of the Royal College of Surgeons; Mr. Ward Cousins, Sir William Priestley, M.P., Mr. H. T. Butlin, Dr. Holman, Mr. Macnamara, and Mr. F. Fowke, representing the British Medical Association; and Dr. Goodall, representing the Melbourne and Victoria Branch of the British Medical Association. Among others present were Sir William Broadbent, Dr. Barlow, Dr. Lauder Brunton, Dr. Buzzard, Dr. Cayley, Dr. Coupland, Professor Corfield, Sir J. Erichsen, Sir J. Fayrer, Sir W. Flower, Sir W. Foster, M.P., Sir A. E. Garrod, Dr. Garrod, Dr. Hare, Dr. S. Hutchins, Mr. Victor Horsley, Mr. Shirley Murphy, Dr. Stephen Mackenzie, Sir James Paget, Professor Burdon Sanderson, Mr. J. Tweedy, Dr. Whipham, Dr. Theodore Williams, Captain Arthur Reynolds, and Mr. G. W. E. Russell. Mrs. Best (sister of the deceased) and Mr. Best, Mrs. J. S. Vaizey (sister) and Mr. Vaizey, Rev. J. H. and Miss Best, Mr. K. G. R. Vaizey and Miss S. E. Vaizey, Mr. and Miss Sharp (nephews and nieces of the deceased), Canon Reynolds, Mr. Talbot Baines, and Mr. A. Baines, Mrs. Martin-Leake and Mrs. Trent-Stoughton (sisters of Lady Russell Reynolds), Messrs. Martin-Leake and the Misses Martin-Leake (nephews and nieces), were also present at St. Peter's, Vere-street. After the lesson the body was conveyed to Paddington and thence by train to Frocester, the station for Owlpen, for the

conclusion of the service. The Vicar of Owlpen met the procession and recited the commendatory portion of the service. Dr. Sedgwick and Mr. Fowke represented the British Medical Association at the grave.

## HOMES FOR THE DYING.

ANYONE who has ever worked in a hospital must necessarily have been struck with the need that exists in London of a home for the dying. It is impossible, and indeed would be unfair, for an ordinary hospital to take in incurable cases; but, so far as we know, there are but three institutions in the whole of London open to this class of case. The oldest is the Hospital of St. John and St. Elizabeth in Great Ormond-street; then comes Freidenheim, near the Swiss Cottage; and, latest of all, the Hostel of God, 82, The Chase, Clapham. All these institutions do excellent work, but it is specially for the last that we now speak. In aid of its building fund a concert will take place on June 9th at Stafford House. Tickets £1 1*s.* each (two for £1 10*s.*) or 10*s.* 6*d.* each (three for £1 5*s.*) may be obtained from Miss Erskine, Speaker's-court, Palace of Westminster, or from the following: Messrs. Lacon and Ollier, 168a, New Bond-street; Messrs. Keith and Prowse, 48, Cheapside; and Messrs. Larner and Stokes, 42a, Chester-square; or subscriptions may be sent to Mr. W. Portlock-Dadson, 281, Strand, W.C.; Mr. W. Hoare, The Brewery, Lower East Smithfield, E.; or to the account of the "Home for the Dying," Messrs. Hoare, 37, Fleet-street, E.C.; to Colonel Hardy, 35, Wellington-street, Strand, on account of the "Home for Dying"; or to the Sister Superior, the Hostel of God, 82, The Chase, Clapham, S.W. In our columns of May 27th, 1893, will be found an earnest appeal from Mr. T. Bryant, and no more words of ours are necessary to impress upon the charitable the excellent work which such institutions carry on.

## "A RIVER VOYAGE THROUGH NORTHERN SWEDEN."

WE have received from the Swedish Touring Club a pamphlet in English bearing the above title. It is freely illustrated and describes the scenery of some of the large rivers which flow into the Gulf of Bothnia from Sweden, and it gives detailed instructions as to the routes, the objects of interest, and the average expenses of the journeys which it sketches out. For some years the Swedish Touring Club has been doing excellent work in opening up to travellers the less frequented districts of Sweden, and the northern or forest regions of that country are among the most beautiful spots in Europe. It is strange that while Norway has for years been overrun with tourists from this country Sweden should remain so long unknown, for unknown it is to the vast majority of English people. Those who have penetrated into the country invariably return full of enthusiasm as to its charms, but when they urge their friends to go there likewise for a holiday their praises too often fall upon deaf ears. It is not at present the fashion to go to Sweden, that is all. The trip from Stockholm up the Baltic coast by steamer to Sundsvall occupies seventeen hours, for the first five of which the vessel is steaming smoothly among the countless islands which form an archipelago round the entrance to Stockholm. This journey among the islands is full of beauty, the steamboats are models of comfort and cleanliness, and the food is uniformly excellent. The traveller is always safe to trust to the catering on board these coasting steamers, because the Swedes are a restaurant-loving people, and insist upon having good food and refreshments wherever they go, so that all anxiety as to commissariat may be dismissed when on board of, or even within reach of, a Swedish passenger boat. On reaching Sundsvall the steamer may be taken up the Indals River, returning later by the Angerman River, and so back to Stockholm, or the traveller can prolong his visit inland. The inland districts are characterised by mountains, pine trees, lakes, and rivers, but among the wilds there exist excellent hotels and health resorts. The fresh and stimulating air, the bright daylight, and the intensely vivid green of the grass and the foliage all tend to make these upland summer resorts excellent. In Sweden the English are always welcome; scrupulous cleanliness prevails, living is cheap and good, meals are served for the most part in the open air, and there is good music to be heard almost everywhere. We strongly recommend our readers who are in search of a new holiday resort to try Sweden, for they will be surprised and charmed with it and invigorated as well.

## OVERWORK AND EMPLOYERS' LIABILITY.

IT is not only in connexion with the management, or rather the mismanagement, of railway service or of retail business that we are brought in contact with the mischievous effects of overwork. A variety of other callings are liable to be disorganised by the same form of excess. Seldom indeed, however, do we find that either the long-continued strain of labour or its disastrous consequences are so palpably evident as in a case recently investigated at the London Hospital. A carman had fallen, while asleep, from his driving seat, and had sustained a fatal fracture of the skull. On examination it transpired that the man had been at work for thirty-six hours consecutively, either cutting or carting garden produce for his employer, and that it was intended that he should work for twelve more hours before taking rest. It is not surprising that the verdict of accidental death passed in this case was accompanied by important modifications. The hazard imposed upon men employed in responsible and heavy duties with such unscrupulous disregard for the absolute needs of existence is not greater than the danger which is, by the same action, thrust upon the general public. Lessons like that conveyed by this so-called accident, moreover, are hard of acceptance unless it be understood that they shall effectively teach the practice of prevention. We need hardly remind our readers that in order to secure this end more is required than the mere censure of a jury. Accidents in which one party is to be blamed for the injury of another may well constitute a ground for liberal compensation. In such a case as that before us this form of expiation is the least that should be regarded as consistent with the legal duty of a culpable employer.

## THE MANUFACTURE OF EXPLOSIVES.

THE twentieth annual report of Her Majesty's inspectors of explosives just published is on the whole a satisfactory one, especially when regard is had to the great number of new explosives invented during the last few years. The number of deaths from accidents by fire or explosion in manufacture was ten only, which, although above the average for the past ten years marks an extraordinary and most satisfactory contrast with the figures which obtained before the Act came into operation (1876). These satisfactory results, it is stated, have been accomplished without any undue or even inconvenient interference with the trade. Makers at home have complained from time to time that the severity of the Act has given a better chance to makers abroad. Of recent years, however, complaints on this head have been less frequent, owing chiefly to the fact that during the years which have elapsed since the English Act was passed other countries have introduced laws and applied regulations affecting explosives based on our own, but as a general rule they have been of greatly increased

stringency. In their remarks upon the slight explosion which occured in the manufacture of cordite at Waltham Abbey on April 22nd., the inspectors were not able to trace the cause of the ignition with certainty. It is remarkable, however, as they point out, that the bulk of the paste fell out of the broken cylinder intact and that the cordite present in the building was not ignited. Only one ounce of the paste in the cylinder exploded, although the charging press from which the cylinder was filled contained about thirty pounds of cordite paste. Bearing in mind the large increase in the number of factories, the increased output, the number of hands employed, the greater resulting chances of accident, and the increase in the enormous number of nitro-compounds made and imported, the Act, as shown by the present report, is evidently doing good work.

## LUNATICS IN WORKHOUSES.

THE Local Government Board have just issued a circular to boards of guardians with special reference to the medical examination of lunatics received into, or removed from, workhouses. The circular appears at an opportune moments when much is being written and said concerning the care of paupers. Instances of failure to make the requisite examination and to record results where examination has been made have come under the Board's notice, and these probably account for the issue of the present document. Careful examination by the workhouse medical officer is enjoined immediately on the admission of a lunatic and immediately prior to removal or discharge; any examination in the latter case made even on the day previous to discharge is to be repeated on the actual date when the patient leaves the institution, special regard being given to any bruises or other injuries on the person. The physical condition of the patient to be removed is also to be a point of consideration by the medical officer. Such examination is in nowise to replace that called for by the Lunacy Act of 1890, where a private medical practitioner is in question. Another point refers to attendance on lunatics detained in workhouses. The Board consider that all lunatic, should be both by day and by night under the immediate charge of paid officers, and that pauper assistance, when it is impracticable to altogether dispense with it, should be under the closest supervision of paid officers. We look upon this as a very important part of the letter, and trust that as time goes on the Board will insist more and more on the replacement of pauper attendance by that of properly appointed and remunerated officials.

## MEDICAL HISTORY OF PEKING DURING THE WAR.

THE thirty-fourth annual report of the Peking Hospital[1] in connexion with the London Missionary Society for the year 1895, by Dr. Eliot Curwen, is interesting. He speaks highly of the activity and efficiency of two native students—Mr. Li Hsiao-ch'uan and Mr. Liu Paoching—between the departure of Dr. E. T. Pritchard and his own arrival. The popularity of the hospital and dispensary seems to increase, the visits paid being 4000 in excess of those of any previous year; thus 33,253 visits were paid by 14,604 patients in 1895. To patients at their own homes 278 visits were paid and 162 were treated in the wards. Unfortunately, we presume for want of funds, only two out of three wards for males were in use. There was a memorable outbreak of cholera in Peking in 1895. Dr. Curwen speaks of it as the most fatal epidemic of the century. It is estimated to have attacked half the houses and to have killed 75,000 of the inhabitants. Few cases were brought to the hospital. If not quickly fatal they were mostly treated by native medical men with acupuncture of the larger joints or of the tongue. As a consequence of this treatment many afterwards became patients at the hospital suffering from acute suppurative inflammation of the larger joints. The prevalence and mortality of cholera need occasion little surprise when we learn that the roads were watered with the contents of open sewers to save the trouble of drawing water from the wells. The Chinese recognise that unboiled water and green fruit generally are ready carriers of the disease. Dr. Curwen acknowledges the willing help in many ways of Dr. S. W. Bushell of the British Legation. One of the most blessed influences in such countries must surely be that of the members of our own profession, whether official missionaries or not.

## THE BIRMINGHAM HOSPITAL SATURDAY FUND.

THE Executive Committee of the Birmingham Hospital Saturday Collection has received a valuable gift in the shape of a seaside home for children. The generous donor, who does not wish his name to be disclosed, has handed over a mansion called Bryn Marle, between the two convalescent homes for men and for women already in use. He is prepared to furnish and maintain it free of cost for the first twelve months.

## THE HEATH SCHOLARSHIP

THE Heath Scholarship has been awarded to Mr. G. P. Newbolt, M.B. Dunelm., F.R.C.S. Eng., for his essay on the Surgical Diseases of the Jaws. The prize is £200. It is awarded every second year to the writer of the best essay upon some surgical subject selected by the trustees of the Heath Scholarship Fund, and only graduates in medicine or surgery of the University of Durham can compete for it. The subject for the next competition is Congenital Deformities, their Pathology and Treatment. The essays must be sent in on or before the last day of March, 1898. Mr. Newbolt is the first winner of this valuable scholarship.

## STATISTICS ON WEIGHT OF INFANTS, SEX AND FŒTAL HEART-RATE.

STATISTICS of large numbers of cases are often useful to correct erroneous impressions on statistics from small numbers. A paper read before the Obstetrical Society of Boston on Feb. 18th of this year is interesting and valuable from this point of view as showing the results obtained from observations in a large number of infants as regards weight, sex and fœtal heart-rate.[1] Thus the assertion is often found in text-books that the fœtal heart-rate of girls is more rapid than that of boys. It appears to depend on the statement made in 1859 by Frankenhauser that the average fœtal rate in boys was 124, in girls 144, and this he obtained as a result of fifty observations. It is no wonder that predictions of sex based on such a small foundation should be disappointing. Taking a thousand cases at full term at the Boston Lying-in Hospital, the average rate of the fœtal heart was as follows: 500 males, 140·26 per minute; 500 females, 141·83. This difference of one and a half beats is, of course, valueless for prophetic purposes. Let us hope that Frankenhauser's statement will no longer be copied into the text-books. The average weight of these 1000 full-term infants was as follows: 500 male infants, 7 lb. 8·9 oz.; 500 female infants, 7 lb. 5·1 oz. It might be said that the slightly slower heart-rate in the boys depended on the slightly heavier weight of the male sex. It is interesting to note, however, that some of the very heavy babies had rapid hearts, and *vice versâ*; so that no individual prediction of the weight of the child could be made by the heart-beat. The variation in the rate of the heart-beat at different periods in the labour is also

[1] Boston Medical and Surgical Journal, May 14th, 1896.

a commonly observed fact. Of 7515 deliveries at the Boston Lying-in Hospital, the heaviest child was a female weighing 12 lb. The infants were all carefully weighed, and the actual weight without clothing was obtained. The following table shows the number of heavy children over 10 lb. in weight born at the hospital:—

| | Male. | Female. |
|---|---|---|
| 10 to 11 lb. ... ... ... | 46 ..... | 25 |
| 11 to 12 lb. ... ... ... | 10 ..... | 5 |
| 12 lb. ... ... ... ... | — ..... | 1 |
| | 56 | 31 |
| Total ... ... ... ... ... | 87 | |

The records of the out-patient department were not considered sufficiently reliable to examine for this purpose. The largest infant, however, in which the record could be trusted weighed nearly 13 lb. This child was carefully weighed in scales that had been tested.

## FOR THE FADDIST.

THE medical officer of health for the St. Olave District has issued a report to the Board of Works for that district on the increasing neglect of vaccination in the union. In 1881 the proportion of children, says Dr. Bond, unaccounted for in regard to vaccination (including cases postponed) in the Metropolitan unions was only 5·7 per cent. of the total births. In 1891 this proportion had risen to 16·4 per cent. In the St. Olave Union the corresponding rates were 4·1 and 15·3 per cent. Of the 676 cases of small-pox that were removed to the hospital ships of the Metropolitan Asylums Board during the six months ending Dec. 29th, 1895, there were 113 under ten years of age, and 68 over ten years and under fifteen years. Of the 113 under ten years of age 104 were not vaccinated, 7 were vaccinated, and in 2 cases there was no history in regard to vaccination. Of the 68 between the ages of ten and fifteen 36 were not vaccinated, 31 were vaccinated, and in one case there was no history in regard to vaccination. Not one of the 68 patients over ten and under fifteen years of age was stated to have been re-vaccinated. The strongest practical evidence that small-pox can be stamped out by vaccination and re-vaccination is supplied by Germany, for since the year 1874 re-vaccination before leaving school has been compulsory, and during the last ten years small-pox has been almost extinct, being at the rate of only one case per million inhabitants; and these few cases are those of foreigners or natives who have not been re-vaccinated. Comment on these figures is needless, and we can only hope that when the report of the Royal Commission on Vaccination does see the light it will insist not only on vaccination but on re-vaccination.

THE secretary of the Royal College of Surgeons of England has issued notices for a meeting of the Fellows of the College, to be held at the College in Lincoln's-inn-fields on Thursday, July 2nd next, at five o'clock. The last day for the reception of notices of motion by the secretary is Thursday, June 11th next, and motions must be signed by the mover or by the mover and other Fellows.

WE are informed by the Colonial Office that a telegram has been received from the Governor of Hong-Kong stating that eighty-one fresh cases of bubonic plague occurred in the colony in the week ending June 1st and that the number of deaths from the plague during that period was seventy-three.

A COMPETITIVE examination for twenty-five commissions in the Army Medical Staff will be held on Aug. 7th next and following days. Particulars thereof will be found in our advertisement columns.

# THOMAS WAKLEY,

## THE FOUNDER OF "THE LANCET."

### A BIOGRAPHY.[1]

### CHAPTER XXII.

*The Revolt of the Members of the Royal College of Surgeons of England.—Wakley's Consistent Attitude.—The Navy and the College.—The Members' Petition in the House of Commons.—Sir Robert Peel for the Defence.—The Decision of the House.*

IT would serve no purpose to trace all the steps of the duel that now took place between the reformers and the College authorities. The part that was played in it by Wakley was throughout consistent and vigorous. The official refutation was treated by him with complete ridicule, inasmuch as it refuted nothing, but only added fresh insults to those which had already been accepted by the Members for years and were now for the first time being resented. In particular, the last paragraph but one of the unfortunate document came in for scorn. The statements that the subversion of the Charter would lead to the election to offices of control and responsibility of persons "who for the most part exercised the professions of apothecaries and accoucheurs," in which case the institution would soon cease to be a College of Surgeons or Surgery, while "a system of continual intrigue and cabal amongst the profession in general would be introduced," furnished Wakley with an admirable text upon which to address the profession at large, and one of which he was not slow to avail himself. Such words he held to constitute a direct insult to the general practitioners of England as well as a distinct attempt to exercise an illegal power. While declaring in uncompromising terms that the general practitioners were much more capable of conducting the affairs of their corporation than were many of the twenty-one councillors elected for life, and frequently displaying evidences of senility while occupying their offices, he pointed out that the Charter—the infamous Charter under which this oligarchical and irresponsible little body claimed the right to control the affairs of the Members—contained no provision for the limitations which the refutation of the College attempted to lay down. There was not a word in the Charter implying any disability on the part of an apothecary or an accoucheur to occupy a seat either on the Council, the Court of Examiners, or even the Presidential bench, and he accused the existent Council of attempting to read into the Charter already upholding no interests but their own unwritten clauses still further securing to themselves all the benefits, honorary or pecuniary, in the power of the College to bestow. This formed an admirable rallying cry for the Members and it was recognised by them as such, THE LANCET receiving at the time an enormous access of regular readers and subscribers among the general practitioners of England, who recognised in Wakley the guardian of their interests, the man who was not only prepared to see that they received some substantial return for their fees, but also that they were treated with the respect due to them as the persons who paid.

It was not until the last day of 1826 that the petition to the House of Commons for the abrogation of the Charter reached its final stage, so that signatures could be invited for it. Spontaneous as had been the revolt of the Members against their rulers, and unanimous as had been their

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., and XXI. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, and 30th respectively.

strongly-worded resolutions of remonstrance at the general meetings, the movement would have ceased at the mere passing of these resolutions had it not been for Wakley's energy, desire for justice, and, it must be admitted, personal implacability. Mr. Lawrence was satisfied with the commotion that had been caused in the comfortable breasts of the Council and from personal reasons was desirous of peace. Many of the leaders in the agitation were also ready to lay down their arms on the promise of some slight concession. But not so Wakley. He held the meeting to their pledged course, declaimed against the perpetual delay in the preparation of the petition, and was finally able to announce that the means of redress had at last been brought within reach of the Members, for the document was lying ready for signature at Freemasons' Tavern. During the eleven months that elapsed between the general meetings and the completion of the petition for signature the columns of THE LANCET had regularly contained leading articles or correspondence bearing upon the strained relations between the Members and the Council. Generally the intent of these articles and communications was very clear; indeed, where Wakley's, Wardrop's, or Lawrence's pen was speaking the terms used were uncompromising to a degree, yet occasionally the connexion between the information given to the public and the actual terms of the internecine quarrel in the profession was not so distinct. But Wakley was not a careless editor nor a promiscuous vilifier of his opponents, and all the notice taken by THE LANCET of the attitude of the Council had a definite reason. When the petition at last made its appearance the prominence given to certain matters not obviously germane to the subject at issue became manifest. Wakley, for instance, had dwelt at length on the fact that the Navy had refused to accept the diploma of the College as sufficient to warrant the advance of the medical men holding it from assistant surgeon to full surgeon. He also inserted from time to time little exposures of quacks and advertising charlatans who claimed to be, and occasionally were, on the official list of Members of the College. Both these points were brought to the notice of his readers with definite intent, as will be seen from the opening words of the petition. Wakley also stirred up the provincial surgeons to present separate petitions of their own in protest against the wrong done them and their hospitals by the recent by-laws of the College, and in two places at least his words bore fruit. For the medical men of the neighbourhoods of Bristol and Winchester instructed their knights of the shire to speak in Parliament in support of the Members' petition.

The petition was an able document, bearing, however, no trace of labour or research, so that it is difficult to understand why it should not have been ready for signature until the end of the year. The resolutions of remonstrance adopted at the general meetings at the Freemasons' Tavern in the spring[2] will sufficiently indicate the lines upon which it was drawn, as it was designed to meet those specific grievances. The declared object for which the Charter of 1800 was granted was "the due promotion and encouragement of the study and practice of the art and science of surgery," the principal means by which these objects were to be brought about being by the conduct of examination into the qualifications and education of candidates for admission into the College or into the medical department of the Navy and Army, the obvious supposition being that the certificates of the College would enable the public to distinguish between the expert and the pretender. The petition then pointed out that the charter had consigned the whole management of the College to twenty-one persons, who, being elected for life themselves, had the privilege of electing whomsoever they liked, also for life, to fill any death vacancies; that these twenty-one persons appointed ten of their own body to form a Court of Examiners and were not accountable to the Members for the appropriation of the funds, nor for any other of their proceedings which were conducted in private. The petition next showed that the twenty-one governors of the College had a direct interest in keeping all the emoluments to themselves and that they did so by preventing other persons than the Court of Examiners and personal friends of that Court from delivering official lectures to the students, upon which followed naturally a representation of the grievances concerning the new by-laws as to the sources of official certificates of attendance at lectures. We now see Wakley's object in inserting matter that must have seemed at the time that it was printed mere irrelevant abuse. *He knew what the petition was going to be.* His object in alluding to the action of the Navy when that department refused to accept under certain circumstances the diplomas of the College as proofs of scientific efficiency is now transparent. One of the main reasons for the existence of the College, one of the specified objects that George III. had before him in granting to the discredited corporation a Royal Charter whereon to begin a new life, was that the College should accept the responsibility of supplying the military and naval services with efficient surgeons. In this the College must be held to have failed. A second main reason for the grant of the royal charter had been to safeguard the public against quacks, the duty devolving on the College to discriminate between the charlatan and the true man of learning. The object of giving prominence to the fact that there were notorious quacks, persons dealing in secret and disgraceful remedies, and whose names were on the official list of the College, now leaps to our eyes. It was to show that in another direction the College had been found wanting to the implied contract between its original governors and the King.

On June 20th, 1827, Mr. Warburton, whose name is more closely associated with the Anatomy Bill of a little later period, presented the petition of the Members to the House. In his speech in its support Mr. Warburton pointed out that in 1797, when the former Corporation of Surgeons were attempting to obtain from Parliament a re-establishment — the parent corporation having ceased to exist in consequence of some irregularities in its procedure — Lord Thurlow persuaded the Lords to scout the Bill because it contained certain clauses inimical to the interests of the Members. These same clauses were now, he said, in active operation under a Royal Charter against the Members, who therefore prayed for relief in the full trust of obtaining it. Mr. Warburton then recapitulated almost in the words of the petition the various tribulations of the Members as exemplified by the six strong resolutions of remonstrance passed at the general meeting,[3] and concluded by moving for a return from the Royal College of Surgeons of England of all public money lent or granted to the College from 1799 to the present time. He specified the grants he required to have information upon as being those made for the purchase, building, and repairing of the College, and for the purchase of the Hunterian Museum. He also desired that the regulations under which the Members of the College and the medical students were admitted to the Hunterian Museum and to the library of the College should be laid on the table, as well as the numbers of persons who had been examined by the College since 1800. He required also an account of all moneys received by the College from its Members and a detailed statement of the appropriation and

[2] See Chapter XX. of this biography.

[3] Loc. cit.

expenditure of these sums and of the sums granted by the State. After a few words from a Mr. Smyth, who said that the petition was the work of interested persons and was based upon no better foundation than feelings of personal pique, Mr. Peel, the Home Secretary (afterwards Sir Robert Peel, the great statesman), rose to speak in behalf of the College. The line of defence adopted was practically a confession of guilt. Mr. Peel, who was a trustee of the Hunterian Museum, said that he had discussed with the Council of the College every subject of complaint preferred in the petition, and that many of the causes no longer existed, and that every one of them that appeared reasonable would be in time removed. The back-door entrance was done away with, the catalogue of the museum was being prepared, and a quarterly statement of the financial affairs of the College would for the future be made public. Mr. Peel did not consider "that there was the slightest ground of accusation against the College," but he was willing to support Mr. Warburton's motion, after the explanation the House had heard of his vote, because he considered Parliament had a right to be informed of the proceedings of an institution which had received large grants of public money.

As Wakley pointed out the following day, Mr. Peel's speech was a very illogical performance. Certain complaints were made concerning the action of the Council; therefore a petition was presented to Parliament begging for an alteration in the Charter which sanctioned the abuses. Mr. Peel rose and admitted that the complaints were being attended to and would receive further attention, and yet said that the petition was presented on no proper grounds of accusation!

The House acceded to Mr. Warburton's motion and the College was called upon to render an account of its stewardship. A temporary victory was thus gained by the Members.

*(To be continued.)*

## THE FIRST QUINQUENNIAL CENSUS IN LONDON.

THE Registrar-General, in his return for the week ending Saturday, May 23rd, briefly notes the results of the recent London census, taken at the end of March last under the provisions of the London (Equalisation of Rates) Act, 1894. Especial interest attaches to the results just published from the fact that the recent census is the first quinquennial census that has been taken in this country. Based on the assumption that the rate of increase of population that prevailed in London during the ten years 1881–91 had since been maintained, the Registrar-General had estimated the population of the metropolitan area known as Registration London in the middle of this year at 4,435,955, whereas the revised estimate for the same date, based upon the numbers enumerated on March 29th last, now adopted by the Registrar-General, is 4,421,492, and 14,463 below the previous estimate. In other words, the recent census shows that the rate of increase of population within Registration or Inner London since 1891 has been smaller than the rate that prevailed during the ten years 1881–91. This recent decline in the rate of increase in Inner London need cause no surprise, since it was pointed out in the last census report that the increase per cent. of population within this area, which had been 16·0 and 17·3 in 1861–71 and 1871–81, fell to 10·4 in 1881–91. Indeed, the actual decline of population in Central London, owing to the substitution of business premises for dwelling-houses, and the migration of the residents to suburban neighbourhoods, a large proportion of which lie outside the arbitrary boundary of Inner or Registration London, has long been in progress at an increasing rate. The population enumerated in March last in Inner London showed an actual increase of 199,528 upon the number enumerated at the previous census in 1891; the increase per cent. in the five years being 4·7, against 10·4 in the ten years 1881–91. The decline, therefore, in the rate of increase was not so great as it had been between 1871–81 and 1881–91. As regards the whole of London the error in the estimate of population, which this quinquennial census has enabled the Registrar-General to correct, was in reality very slight, and for general statistical purposes might be disregarded. When we come to consider the more distinctly local results of the census the value of the quinquennial figures, meagre as unfortunately are the details available, becomes patent. It is distinctly evident that in many sub-divisions of the metropolitan area the rate of increase between 1881 and 1891 afforded no trustworthy indication of the increase since 1891.

One of the most strongly marked features of the new figures is the evidence of the arrest of the rapid decline of population in the central districts. It was pointed out in the last census report that in eleven of the central registration districts the enumerated population showed an actual decline during the ten years 1881–91 equal to 7·2 per cent. in the aggregate and ranging from 25·5 per cent. in London City, 18·8 in Westminster, and 18·1 in the Strand, to 2·0 in Shoreditch and in Stepney and 0·8 in St. Pancras. In the five years 1891–96 the decline was changed to increase in three of these eleven districts—namely, in St. Pancras, Stepney, and St. George-in-the-East; while in each of the other eight districts the percentage of decrease showed a marked decline except in London City, where the decrease in the five years was 17·2 per cent., against 25·5 in the preceding ten years. In the aggregate of the eleven districts the percentage of decrease in the five years was only 1·0 per cent., whereas in the previous ten years it had been 7·2 per cent. The nineteen other registration districts which showed an increase in the ten years 1881–91 continued to show an increase during the five years 1891–96, but the percentage of increase, which had been 29·3 and 17·5 in the census periods 1871–81 and 1881–91, further declined to 6·6 per cent. in the five years ending with March last. The increase, with very few exceptions, showed a decline in each of these nineteen districts; the most noticeable exceptions were Whitechapel and Lambeth, in each of which districts the increase was proportionally far greater than it had been in the preceding inter-censal period. The most marked decline in the rate of increase naturally occurred in Fulham, Hammersmith, Hampstead, Wandsworth, Lewisham, and Woolwich, in which the percentages of increase had been exceptionally large in 1881–91. In Fulham and Hammersmith, for example, the increase in the five years 1891–96 did not exceed 15·4 per cent., against 74·0 and 64·5 in the two ten-year periods 1871–81 and 1881–91. It is much to be regretted, from a statistical point of view, that the scope of the recent census did not include Greater London, as, having regard to the continued decline in the rate of increase in Inner London, it would be full of interest to know whether the percentage of increase of population in Greater London, which declined from 22·7 in 1871–81 to 18·2 in 1881–91, is continuing to decline. For information on this point, however, it seems necessary to await the next national census in 1901. As a matter of fact, the recent census embraced the area of the Administrative County of London, which includes the hamlet of Penge (with a population in 1891 of 20,375), in addition to Inner or Registration London. It has long been a matter for serious regret that no measures have been taken to include Penge within Inner or Registration London, which would thus be made co-extensive with the Administrative County of London, the main obstacle to which appears to be that Penge forms part of Croydon Registration District and Poor-law Union.

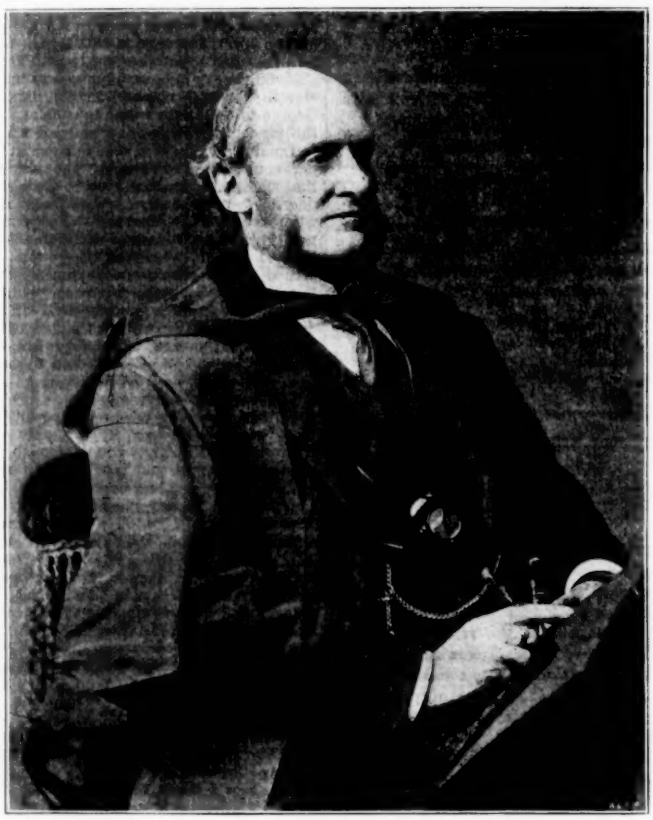
THE annual meeting of the Incorporated Medical Practitioners' Association was held on May 14th at the Holborn Restaurant. The annual report showed a rapidly increasing membership and the formation of important branches in Devon and Cornwall and in Lancashire and Cheshire during the past year. A number of new by-laws providing for an extended organisation of the Association were passed, Dr. Bedford Fenwick was elected president, and the council and other officers were appointed for 1896–97. A considerable number of members and their friends dined together in the evening under the chairmanship of the late President, Mr. George Jackson, F.R.C.S., of Plymouth.

# Obituary.

## SIR JOHN RUSSELL REYNOLDS, BART., M.D., F.R.C.P. LOND., F.R.S. LL.D. ABERD., LL.D. EDIN.,

PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION, PHYSICIAN TO HER MAJESTY'S HOUSEHOLD, CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, AND LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

WE deeply regret to announce the death of Sir John Russell Reynolds, which took place at his residence in Grosvenor-street on Friday afternoon last (May 29th). He had been failing in health during the whole of the present year, but no organic mischief having manifested itself it was hoped by his friends and medical advisers until the end that the great debility, which was the chief and for some time the only obvious sign of illness about him, would give way to rest, treatment, and change of air, and that a return to health would be established. These hopes have been disappointed, for in spite of the most watchful medical care and assiduous nursing the weakness steadily increased until, at the beginning of last week, a condition of extreme prostration was reached, from which he never rallied, but gently passed away in a condition of painless unconsciousness.



SIR JOHN RUSSELL REYNOLDS, BART., M.D., F.R.S.,
LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

John Russell Reynolds was the second son of the Rev. John Reynolds, a distinguished figure in the Nonconformist world, and the grandson of Dr. Henry Revell Reynolds, F.R.S., who was physician to Middlesex Hospital at the beginning of the century, Goulstonian Lecturer, Censor, Harveian Orator, and Elect of the Royal College of Physicians, and Physician in Ordinary to King George III. John Russell Reynolds was born at Romsey in Hampshire in 1828 and his early education was received at the hands of his father who had been captain of Westminster School and classical scholar of Oriel College, Oxford. Having decided to follow in the steps of his grandfather he proceeded in 1846 to University College, London, where his elder brother Henry (the Rev. Dr. Henry Reynolds, late principal of Cheshunt College) was already a distinguished student. His medical career was exceedingly brilliant. He obtained gold medals at University College in medicine, clinical medicine, and obstetric medicine and graduated in the University of London as University Medical Scholar and Gold Medallist in physiology, comparative anatomy, and medicine. With this record of successful performances and a high character for industry, conscientious work, and zeal, the young physician was marked out by his colleagues and tutors as a coming man, so that it was felt by all when he decided to leave London to practise in the country that he was renouncing a future of assured brilliancy. Dr. Russell Reynolds was not, however, a man of large private means, nor was his father able to afford him much pecuniary assistance, and the opening at Leeds of which he decided to avail himself on becoming qualified was attended with peculiar advantages for him, inasmuch as he had influential friends and relations in the town to whom the details of his promising career were well known. But, hardly had he settled down in Leeds when an unexceptionable opportunity for London practice presented itself to him. His great friend and brilliant teacher, Dr. Marshall Hall, F.R.S., the discoverer of the reflex functions of the spinal cord, decided to leave London and give up professional work, and his house in Grosvenor-street was offered to Dr. Russell Reynolds upon favourable terms. The house was familiar to him, for in his late student days he had been one of the half-dozen men who met weekly there to be less, perhaps, instructed than inspired by the prolific imagination of the greatest neurologist of the mid-century. He was at first anxious to avoid the responsibility of starting in practice in so conspicuous a manner and in so expensive a locality. He was satisfied with his chances at Leeds though the new prospect tempted him much. But his friends and his teachers were so urgent that he should lay aside modesty and come to London to command the success that lay ready to his beck that he accepted the surrender of Dr. Marshall Hall's lease of 38, Grosvenor-street and established himself there in 1852, in the house where he died forty-four years later.

Dr. Russell Reynolds was fortunate. He had not long to wait for recognition. In 1855 he was appointed assistant physician to the Hospital for Sick Children, Great Ormond-street, in 1857 assistant physician to the Westminster Hospital and Lecturer on Forensic Medicine in the school, and in 1859 assistant physician to University College Hospital. This appointment brought him back again (to his and their extreme pleasure) among his old teachers and friends, Sharpey, Walshe, Thompson, Jenner, Wilson Fox, Henry Thompson, and Erichsen, to mention a few whose names immediately recur to memory, and in this brilliant circle he was made entirely welcome, being

recognised, not only as a colleague most grateful to their sentiments, but as a powerful adjuvant to the teaching resources of the institution. In 1862 he became full physician to the hospital and Holme Professor of Clinical Medicine, and three years later he succeeded Sir William Jenner as Professor of the Principles and Practice of Medicine in the College.

He immediately made his mark as a lecturer. He was lucid, learned, informatory, and, above all things, original. Deeply read as well as practically expert, he knew the difficulties which lay before his hearers, and he took his own way to clear them up. With a command of French and German as well as of his own language, it was no trouble to him to find a new manner of saying old things or new examples elucidatory of old knowledge; consequently he was able to clothe the truisms with which all scientific lectures must abound, and the repetitions, without which they would be incomprehensible, in a perpetually novel and striking attire of ideas and words. And stress must be laid upon the fact that this display of subtle intelligence and verbal felicity was, as has been said, no trouble to him. Never was a lecturer less affected. Never did a public speaker hunt less or grope less for the allusion that should seem extraordinary or the quotation that should seem apt. There was with Dr. Russell Reynolds no necessity for effort and no concealed struggle—facts which accounted for the pleasure with which he was always heard by his audience. Fluently, accurately, and with absolute precision he taught his science, while, having his learning at his finger tips, his poetic similes and quaint, humorous illustrations made their natural appearance in his discourse and riveted in the memory of his hearers many a simple fact, as well as many an elaborate argument, that in the unilluminated page of the text-book had seemed without importance or, perchance, without meaning. His old pupils to this day speak of their attendance at Reynolds's morning lectures in medicine not merely as a part of their routine medical education to which they were forced to submit, but rather as an interlude in that education from which they reaped not only substantial assistance in their comprehension of medicine, but absolute intellectual pleasure and wider views of life.

Dr. Russell Reynolds's skill and eloquence were the outcome of his intimate knowledge of his subject and the wide range of his general culture, but that does not account for all his success in lecturing. These things would have given him the material, but his literary skill gave him the power of performance. For although, compared with many men of less eminence in the profession, he was not a voluminous writer, it was as an author that he won his spurs, and as an author that he justified in the eyes of the profession his early success as a consulting physician and his prompt election while still quite young to so many important medical posts. His first medical work was an essay upon Vertigo. This was an expansion of a short paper read before the North-west London Medical Society in 1854 and reprinted at the request of some of those present who recognised in it a genuine contribution to medical literature. The essay marked its author out at once as an observant clinician and a well-read neurologist. It was a sketch of the development of medical knowledge concerning the causes of rotatory movement, the phenomena being for purposes of clearness distributed into "vertiginous movements" and "vertiginous sensations." Although largely a historical *résumé* the author's reflections had the stamp of an original mind, while the clearness and grace of his style contributed to the value of his monograph. This essay was followed in the course of a few months by two larger works having the titles, "The Diagnosis of Diseases of the Brain, Spinal Cord, and Nerves," and "Tables for Diagnosis of Diseases of the Brain." These constituted at the time the most clear and explicit account of the diseases of the nervous system that had appeared. It was characteristic of the author's precision and modesty that, having defined the scope of the work as a collection of what was known, he made no attempt to increase the stock of individual pathological observations. He dealt with the things that were before the profession and reduced to their proper value such semeiological phenomena as had already been recorded in connexion with disturbances of the functions of the brain and spinal cord. These contributions to the literature of neurology were followed in 1861 by his book on Epilepsy. This was a brilliantly written application to medicine of the statistical method now generally followed, but introduced into medical literature by his teacher and colleague, Dr. Walshe. The book at once carried Reynolds to a position as leading authority on diseases of the nervous system, confirming him in the place left vacant by the death of his friend Marshall Ward. The full title of the book was "Epilepsy, its Symptoms and Relations to other Convulsiv Diseases," and it was a picturesque, accurate, and forcible treatise upon all epileptiform conditions, far ahead of the general knowledge of the day, both revealing great acumen in the interpretation of obscure manifestations, and carrying the facts as far as their small amount would permit.

These treatises possessed the same qualities that we have noted as characteristic of Dr. Reynolds's verbal addresses—in fact, he imported into his lectures the precision of style and wide range of learning that he had cultivated in his writings. He was author first and lecturer afterwards. This may be seen in his Lectures on the Clinical Uses of Electricity, which appeared in 1871, and which are the only examples of his lectures which were ever printed for public circulation. At this date but little was known of electricity in its application to medicine or physiology. There were no electrical departments in connexion with the general hospitals, and the lectures, when they appeared were a revelation to the profession of the workings of what might almost without exaggeration be termed a new therapeutic agency. They presented the subject from the side of practical medicine, not from that of electrical science which has dominated some writers to an unpractical degree. But they would never have been printed had it not been that Dr. Reynolds's most assiduous and brilliant pupil at the time asked him one day when the course was completed why he did not publish his lectures on electricity, seeing that the subject was one on which the profession badly wanted instruction. Dr. Reynolds confessed that he shrank from the trouble because the lectures had been delivered from notes only and no real manuscript existed. "I can bring you the manuscript in the course of a few days," said the student (who was W. R. Gowers), "for I have taken down your lectures *verbatim* in shorthand as they were delivered."

In 1866 appeared the first volume of "A System of Medicine" under Dr. Russell Reynolds's editorship, and published by Messrs. Macmillan and Co. The science of surgery had some two or three years previously been summed up by the greatest British authorities under the superintendence of Mr. Holmes, and it was widely felt that a similar work on medicine was required; and it speaks very highly for Reynolds's reputation in the profession that at his age, and having been full physician to a general hospital for but one year, he should have been able to surround himself with a brilliant staff of representative medical authors. He discharged his own share splendidly. He wrote several admirable and lengthy articles; for instance, those on Erysipelas, Epilepsy, and Hysteria, but especially he excelled in his general introduction. This was the ablest summary of the existent conditions of medicine that had appeared. It dealt successively with the definition and nomenclature of disease, its natural history and diagnosis, therapeutics, and hygiene. The editor made no attempt to dogmatise. He laid down the principles on which a systematic treatise on medicine should be written with a happy union of philosophical acuteness and practical common sense. No one more thoroughly realised the insufficiency of the nomenclature of that day than did Reynolds, yet he furnished good reasons for compromise in the matter. Obvious mistakes must be corrected, but old associations must be respected. These were his extremes and he found the mean. In the passages devoted to the consideration of what is meant by symptoms of disease he rose to a very high level of philosophical discussion without for a moment losing his peculiar clearness of expression. It would be impossible to imagine a more beneficial corrective of loose style than the marshalling of his arguments; and as THE LANCET of that date said on the appearance of the first volume, "Many hard-worked medical men whose soul has often fainted within them when wandering in the howling wilderness of medical nosology welcomed with relief the simplicity of his scheme of classification." The "System of Medicine" took over ten years to complete, and the amount of trouble as well as literary labour that it entailed upon its editor was very great, in spite of the help he received, for the first three volumes, from the late Dr. Anstie, and for the last two from Dr. Gowers. He rightly allowed his staff free speech, but they took advantage of his genial administration and were unpunctual with their contributions and not careful to avoid the limitations in space laid down

for them. The great work suffered by the delay, as the sense of cohesion so perfectly suggested in the editorial foreword somewhat evaporated, while several repetitions crept in; but further exceptions to Reynolds's System have never been taken. It was a record of the science of medicine in its day, and many of its sections have been of permanent value to the profession; it was, in short, a great work, planned with boldness and due regard to order, and executed with thorough efficiency.

It is time to return to Dr. Reynolds's more purely professional career. Having proceeded to the degree of M.D. Lond. in 1852, he was elected a Fellow of University College in 1856 and a Fellow of the Royal College of Physicians of London in 1859. In 1868 he was appointed an Examiner in Medicine in London University for a period of five years, and in 1869 he was elected a Fellow of the Royal Society at the instance of his teacher, Professor Sharpey. At the Royal College of Physicians of London he was appointed Lumleian Lecturer in 1867, Censor in 1878, and Harveian Orator in 1884. The Lumleian Lectures and the Harveian Oration form a remarkable contrast in their style and in intention and illustrate well Reynolds's wide range of thought. The former had as their title "On Some Points in the Relation between Medical and Legal Practice," and were a good example of his simplicity and lucidity in dealing with matters of fact. The subject was one that interested him much (he returned to it later with a *brochure* entitled, "On the Scientific Value of the Legal Tests of Insanity," in which he dealt thoroughly and not very flatteringly with all the *criteria* of insanity upheld by the Courts), but he felt that it was one for assertion rather than speculation—one in which his task was to make things clear by the directest methods. The Harveian Oration, on the other hand, was a brilliant essay on the progress of medicine, full of original thought and beautiful simile, elaborate and eloquent, and terminating in a noble estimate of Harvey's character as a religious man, although an unfettered seeker after truth. It was a fine piece of high thinking expressed in appropriate words, but it was not absolutely simple reading.

In 1878 Dr. Russell Reynolds was appointed Physician to the Household, a post in which he earned the gratitude of many of Her Majesty's old servants as well as the esteem of his Sovereign; in 1884 he became consulting physician to University College Hospital; in 1890 he was appointed Senior Censor of the Royal College of Physicians of London; and in 1893 President of the College in succession to Sir Andrew Clark. In 1895 he was elected President of the British Medical Association, a post which he still held at his death, and in the same year he was created a Baronet. The present year brought further honours to him, for since its commencement the Universities of Edinburgh and Aberdeen have conferred upon him the honorary degree of LL.D. For his tenure of office as President no one had anything but words of warm praise. He was business-like, punctual, observant, and restful. The deliberations over which he presided took their tone from him, and it greatly facilitated official labour: he did not spare himself and made the wheels run smoothly for others.

Our readers are now in a position to estimate the loss that the death of Sir John Russell Reynolds will cause to the profession and the deep grief that is suffered by his devoted wife, his relations, and his large circle of affectionate friends. His life had been so busy that they and he alike were looking forward to the time when he should consider that the call of duty no longer precluded him from seeking a well-earned leisure. Not that for such as he freedom from the duties of office and the cares of practice would have meant idleness. Far from it. But it would have meant a period in which the time would have been his own to use as he chose—a form of leisure which it had not been his lot to enjoy for fifty years. That he would have turned aside now and again from medicine and pursued the arts of music and painting, in each of which he was an amateur of no mean proficiency, is probable, but the medical profession would also have benefited directly by a prolongation of his life. It was his intention to give to the world at the earliest possible date some of the results of his enormous practical experience in the form of a volume of scattered essays. He loved writing and was an artist in words. Therefore his literary output during his working life was, on the whole, small, for he required a certain aloofness from daily routine before he could make his pen serve faithfully its accurate, poetic, and fastidious master. The projected volume would have been largely a collection of addresses, speeches, and papers already published, but the additions would have transformed these into a new contribution to medicine, for it was Sir Russell Reynolds's design to write to each essay an appendix, bringing it up to date, and adding to it out of the carefully recorded experience of nearly half a century's assiduous practice in ward and consulting-room. That such a book would have had a deep and abiding interest for the profession we feel sure, but the bitterness of death interfering with the fulfilment of his design is not in this instance undiluted. Had Sir Russell Reynolds required such a monument to his memory it would have been sad that he should have died before its erection, but apart from his high official positions—indeed, decades before he reached them—he had earned for himself a secure position in medical history. His early writings were far in advance of any previous attempts to systematise the symptoms arising from nervous lesions. He appeared at a transition period, when order was just discernible forming itself out of chaos, and he was largely responsible for that order. Five or six years before the paths of microscopical investigation had been made plain by Lockhart Clarke, Reynolds was working at the clinical aspect of diseases of the nervous system and perfecting the knowledge and proving the surmises of Marshall Hall. Later a flood of light was to be thrown on these subjects by the philosophical lore, the research, and the clinical teachings of Hughlings Jackson, Bastian, Ferrier, Gowers, and Buzzard; but during the interval the torch was held aloft by Reynolds. He laboured at his subject, he interested as well as instructed others, he made things plain so that his successors could start with ease where he left off, and he rescued the manifestations of hysteria and epileptoid conditions from the curious uncanny kind of mystery in which they were shrouded and showed them to the whole profession as simple results of cause and effect. These are great accomplishments, and Reynolds, denuded of official and Court dignity, of his prestige as a writer, his reputation as a lecturer, and his claims upon the public as a general physician, would still remain secure of his fame as a pioneer in the science of medicine.

It was because of his early success as a neurologist and his abiding interest in the nervous phenomena of disease that the profession and the public alike decided that he should be a specialist; but a specialist he never was, and in its limited sense he repudiated the character very strongly, arguing that any success he might have achieved in particular walks was entirely due to the fact that his work had been thorough, comprehensive, and general. As has been said, one of the subjects in his "System of Medicine" on which he chose to write himself was Erysipelas, and as a clinical teacher he was every whit as effective and as instructive when discoursing on diseases of the lungs or of the heart or acute specific diseases as when dealing with the branch of medicine with which he was supposed to be most familiar. He carried his characteristic width of knowledge into all his work, and the practitioners who knew him best had equal reliance on his judgment in all classes of disease.

This sketch of the life of the great man just gone from among us would be incomplete without a brief presentation of his private character. Sir Russell Reynolds was a rigidly strict man in his code of honour, but full of kindness and sympathy. He was an exceedingly affectionate friend, but not at all a man of promiscuous friendships. High-minded, sensitive, and physically delicate, he shrank from the companionship of numerous persons to whom he was willing to be just, of whose merits he was appreciative, and whose interests he would take endless trouble to serve. But many of these he could no admit to intimacy, his standpoint in so many of the details of life being different from theirs. Studiously grave and quiet in his manner, those who did not know him well might have mistaken him for a melancholy man. And it would have been a mistake indeed, for all things, save a very few, he was ready to regard in a humorous light, while his conversation and his writings were full of witty allusion and quaint illustration, and he was never happier than when he found himself the cordial host to a group of congenial friends.

For religious effort of thought or deed he had the sincerest respect. A friend (not of the medical profession) who has known him intimately for more than the last thirty years has written to us thus concerning him, and it would be impossible to improve upon this estimate of Sir Russell Reynolds:—"Of all the men

whom I have seen with their armour on or off he will ever live in my memory as most keenly sympathetic. Nothing personal put him out, and yet this came from no apathy of temperament, for he was quick in responding to every phase of life, but from sheer power of apprehension and ability to see in a glance that something could always be said on both sides in a crisis which other men might take time to disentangle and so be drawn into hasty or complacent utterance. Though eminently tolerant and tender-hearted, Dr. Reynolds was not a man to make things pleasant or speak smoothly when he smelt dishonour, duplicity, or injustice, for he had no respect of persons and delivered his mind when occasion arose with unmistakable distinctness. He was, moreover, thoughtfully unselfish, putting himself, for instance, to continuous trouble in a case of the most commonplace suffering if he thought he might be able to mitigate it. And when a friend was ill, though not necessarily a patient, his loving tenderness was enough to make the sufferer think that Reynolds had no other claim upon him or drain upon his time. And he was as generous with his purse as with his power, and wise though free in his charity. There is no need of many words to record the manifold hospitality shown by Lady Reynolds and himself, but it was, perhaps, at the gathering of a few friends that the charm and flavour of it came to be most shed and felt, for though he could speak and preside with gracious effect he did not exult, as some do, in the semi-public performances of a host. It was in the warm social atmosphere of his own house that his geniality unfolded itself. And this was backed by what many learned and wise souls are without—i.e., the keenest sense of humour and ability to discern between the ridiculous and the witty in man and his ways."

His old friend goes on to say: "In setting sadly down a few of the things which crowd my memory while thinking of the sorrow now fallen upon his family and so many beside myself, those who knew him best feel it to be mitigated by the remembrance of the high motives which were plainly behind all that he said and did. They know, moreover, that his incisive scientific perception was associated with a profound sense of those hidden laws of life which elude analysis, but cannot be disregarded by genuinely intellectual minds. He was moved and strengthened by the deepest Christian faith, of which he made no reproachful display, though he never shrank from openly claiming it as a true support of his life and work, being a devout worshipper and communicant at his chosen church."

We hope that we have drawn Sir John Russell Reynolds with sufficient distinctness for our readers to recognise what manner of man it was whose remains were quietly laid to rest in the little Gloucestershire churchyard on Tuesday last. It only remains to add a few words concerning his last illness. During the whole of last year he was undoubtedly overworked. He suffered severely from influenza in March of that year, while he was prevented through his numerous engagements, official and private, from securing a proper holiday. Though with somewhat of a struggle, he succeeded in discharging conscientiously his double duties as President of the Royal College of Physicians of London and of the British Medical Association, and left London in the autumn. In November he again fell a victim to influenza, but returned to his work before Christmas. He was undoubtedly not quite himself at the end of the year: he had not recovered strength or tone and was occasionally very weak in his movements. At the beginning of 1896 he went to Hastings, and returned somewhat stronger and feeling himself more apt for work. But the improvement was of short duration, the physical weakness increased, and at the advice of his friends he decided not to offer himself for re-election in April as President of the Royal College of Physicians of London. Again he left London, and again returned feeling better, so much better, indeed, that on the day of his return he saw patients and made appointments to see others. But that afternoon, most unfortunately, on returning from a drive he slipped on his own doorstep and bruised his ankle severely. The injury was sufficient to compel him to keep his bed, and from that time he went steadily down, slowly at first, but at the end rapidly. Until the last week or so of his illness he preserved his faculties, but the intellectual capacity was badly served by the extreme physical failure. On Friday last (May 29th) he died peacefully and painlessly without a struggle in the presence of his devoted wife, who never left him for a moment during his long illness. To her we tender our sincere and respectful sympathy, feeling sure that it must be a consolation to her even now when her sorrow is keenest and greenest to know that her husband's memory will be preserved with unstinted honour in the hearts of the profession that he adorned and served so well.

## CHOLERA IN EGYPT.

As regards the progress of this disease in Egypt the returns for the week ending May 30th show that there were 111 cases and 93 deaths at Alexandria and 286 cases with 243 deaths at Cairo. At Tourah there were 119 cases and 80 deaths. With regard to the disease in the provinces and outlying districts and villages the statistics are scanty and unreliable, but there does not seem to be any doubt that the epidemic is slowly but surely extending itself, in Lower Egypt especially. A fatal case has occurred among the British troops quartered at the citadel in Cairo, but as it was an isolated case and the soldier occupied a detached building it was not deemed necessary to evacuate the barracks. The latest returns show that the number of cases at Alexandria and Cairo is declining. Five deaths from cholera occurred at Alexandria on the 1st inst., and 35 in Cairo. There are at present in Cairo about 162 cases altogether. Since last September over 3000 cases have occurred, with a mortality of over 2500. The Egyptian Government has, it is understood, requested the Pasteur Institute to send a mission to Cairo to make experiments with a new anti-cholera serum. The authorities in Egypt have had many warnings of late to set their house in order and prepare for an outbreak of epidemic disease by the introduction of some scheme for the water-supply and drainage of its larger cities and towns and the organisation of sanitary measures generally, but the complicated nature of the government of the country and its opposing factions, the cost of carrying out sanitary engineering works—to say nothing of what particular scheme should be adopted—and the opposition that all sanitary measures and precautions have to encounter have hitherto prevented any adequate action in this respect. The disease (cholera) was there; it was only dormant and ready to manifest itself afresh on favouring climatic conditions. The high death-rate among the native population, and especially among the children, that occurs year after year also affords a sufficient indication of the state of public health and hygiene in Egypt. The adoption of sanitary measures when an epidemic is actually present is always most difficult and frequently futile, while their enforcement often provokes great opposition and mob riots among an ignorant and fanatical population, as has been the case at Cairo on the present occasion. However, we can only repeat now what we have so often urged already in connexion with this subject. There is no royal road and short cut to dealing effectively with epidemics. Once they have begun the stamping-out process among mixed populations is by no means so simple as people imagine. The lesson that experience enforces on us is, that the way to stamp out epidemics is by removing the soil in which they grow by precautionary sanitary measures adopted in advance of their occurrence. Meanwhile the sanitary authorities in Egypt have to deal with the facts confronting them as best they can, and it must in justice be said that they seem to be acting with energy and good judgment.

While there is no doubt about the nature of the disease prevalent in Egypt, there appears to be considerable doubt as to the presence of epidemic cholera in Spain, where a cholera scare has nevertheless arisen. There have been a few suspicious cases at Toledo and a large number at Carpio, in the same province, but as the disease has so far not been attended with fatal results it is scarcely likely to be true cholera; indeed, the outbreak has been locally attributed to bad milk.

When writing a memorandum in January last on the recent outbreak of cholera in Egypt, Dr. Rogers Pasha, C.M.G., D.S.O., the head of the sanitary department, said, "Whether the disease will be entirely stamped out before the summer, I cannot say," and Lord Cromer also made a similar reservation in his report. For some months it appeared as if these precautionary utterances were superfluous, for from the week ending Feb. 4th, as will be seen by the subjoined table compiled from the official *Bulletins Hebdomadaires*, the epidemic seemed to be entirely extinguished

throughout the country, save for occasional sporadic cases at Alexandria, where it might *a priori* be supposed that they could be most effectually dealt with:—

| Week ending 1896. | Place. | Government ambulances. | | | | | Deaths from cholera outside ambulances. |
|---|---|---|---|---|---|---|---|
| | | Remained. | Admitted. | Recovered. | Died. | Remaining. | |
| Feb. 4th ... ... | Charkieh. | 1 | — | 1 | — | — | — |
| ,, 4th ... ... | Gharbieh. | — | 1 | — | 1 | — | — |
| ,, 4th ... ... | Alexandria. | 5 | 1 | 2 | 2 | 2 | 2 |
| ,, 11th ... ... | ,, | 2 | 2 | 3 | — | 1 | 2 |
| ,, 18th ... ... | ,, | 1 | 4 | 1 | 2 | 2 | 10 |
| ,, 25th ... ... | ,, | 2 | 9 | — | 3 | 8 | 14 |
| March 4th ... | ,, | 8 | — | 5 | 1 | 2 | 5 |
| ,, 11th ... | ,, | 2 | 2 | 2 | 1 | 1 | 4 |
| ,, 18th ... | ,, | 1 | — | — | — | 1 | — |
| ,, 25th ... | ,, | 1 | — | 1 | — | — | 1 |
| April 1st ... | ,, | — | 1 | — | 1 | — | 1 |
| ,, 8th ... | ,, | — | 7 | — | 2 | 5 | 18 |
| ,, 15th ... | ,, | 5 | 2 | — | 5 | 2 | 7 |
| ,, 22nd ... | ,, | 2 | 3 | — | 2 | 3 | 5 |
| ,, ,, ... | Assiout. | — | 1 | — | 1 | — | — |
| ,, 29th ... | Alexandria. | 3 | 5 | 2 | 3 | 3 | 4 |
| ,, ,, ... | Korshid. | — | 1 | — | 1 | — | — |
| ,, ,, ... | Tantah. | — | 1 | — | 1 | — | — |
| ,, ,, ... | Zagazig. | — | 1 | — | 1 | — | — |

Towards the end of April, however, a fatal case was reported from Assiout in Middle Egypt, and the following week the Delta was found to be once more contaminated in three distinct centres. Since then the resurgent epidemic has made alarming progress, the chief places attacked being Alexandria, Cairo, old Cairo, and Tourah, and unfortunately the expectant attitude assumed by Dr. Rogers Pasha is only too completely justified.

It is a remarkable thing that for close on three months cholera should have remained smouldering in Alexandria while elsewhere the disease was apparently stamped out. Alexandria is supposed to be the most advanced town in Egypt with regard to civilisation. It contains many splendid buildings, well lighted and paved streets, and boasts of an efficient scavenging service. Its internal affairs are administered by a municipality in which the European element largely predominates, and there should be no lack of money to place the great seaport above reproach from a sanitary point of view. Alexandria is also the only town in the country which possesses sewers, but unfortunately it is a question whether these subterranean channels are not a source of more harm than good. Built in piecemeal fashion on the massive culvert plan they do not possess sufficient fall, or anything like it, and the house connexions, as a rule, permit the freest reflux of noxious gases. Even in the newest and most palatial edifices the drainage of the block is effected through uncemented shafts left in the thickness of the wall during the process of building. These unlined shoots permit the oozing out of the fluid contents and hence the unsightly patches defacing the rear, and in some cases the façade of the imposing-looking structures. The privy accommodation is of the most primitive description, consisting of a marble slab with a hole in the centre. It is invariably situated next the kitchen or even in the same apartment with merely a screen between it and the stove. When a medical man visits a patient and wishes to ascertain the state of his bowels the stock inquiry is, "Have you been to the kitchen to-day?"

In this connexion the following extract from a report by Sir E. Baring (now Lord Cromer), which was presented to the British Parliament in 1891, will be read with interest:—"I have already spoken of sanitation in dealing with the medical department. I will here only add that an attempt was made some years ago to introduce something like order into the sewerage system of Alexandria; it had to be abandoned, as it was found impossible to carry it into execution without infringing the legal rights of the European residents. It is especially in matters of this sort that the rights conferred by the Capitulations hamper well-intentioned efforts at reform, and act in a manner which is in reality detrimental to the true interests of Europeans and natives alike."

It will readily be understood how terribly handicapped the sanitary officials must have found themselves whilst endeavouring to dislodge their enemy from his ultimate stronghold, and truly it is no wonder that under the circumstances they were unsuccessful. After lingering in Alexandria for nearly three months the epidemic has burst forth with renewed virulence, and all the work of repression has to be recommenced. Sisyphean labour of this description is unquestionably discouraging, but there is not, of course, the least reason to dread the slighest relaxation of effort in the case of the Englishmen employed in the sanitary department. The European members of the Alexandria municipality are said to have fled from their posts, frightened out of all sense of duty and decency by the death from cholera of a well-known lady. As long as the victims were natives of the lower classes no one seemed to care very much, but no sooner did the disease attack a European than, as on former occasions, panic at once set in.

## PUBLIC HEALTH IN MASSACHUSETTS DURING **1894.**

THE twenty-sixth annual report of the State Board of Health of Massachusetts is well worthy of the series to which it belongs, and this is no faint praise. For many years past these volumes have ranked with the very first of public health literature, and the work which the Board have done and are doing, more especially in experimental directions, entitles them to the gratitude of all workers in sanitary science. To attempt a review of a volume containing some 1000 pages in the space at our disposal is obviously futile, but we may, by giving some indication of its more important contents, serve to guide those interested in the subject of which it treats to the valuable matter it contains. On the subject of small-pox and vaccination there is much of interest, and in these days it is as well to cull statistics from foreign as well as from home sources. From 1885–94 the fatality-rate from small-pox among the vaccinated was 5·5 per cent. as compared with 29·1 among the unvaccinated, and 27·4 among the unknown. For the years 1888–94 the details with regard to age distribution are given, and these show that: (1) no vaccinated child under one year was attacked with small-pox, as against 17 among the unvaccinated, and of these latter 9, or 53 per cent., died; (2) among vaccinated persons under fifteen years of age there were 18 attacks and no deaths; (3) among vaccinated adults there were 109 attacks and 8 deaths, or 7·3 per cent.; (4) among unvaccinated adults there were 66 attacks and 21 deaths, or 31·8 per cent.; and (5) all the deaths of the vaccinated were among adults, while nearly 42 per cent. of the deaths of the unvaccinated occurred among children.

The report contains an interesting summary of statistics of several states and countries for the twenty years 1871–1890, and as regards a comparison of Massachusetts with England and Wales, the marriage-, birth-, and death-rates of the former were 18·1, 25·7, and 19·7 respectively, while for the latter they were 15·6, 34·0, and 20·3. The statistical aspect of the report under consideration is very fully developed, and it will repay perusal by all those who are interested in comparing the statistics of the several infectious diseases in the old and new world. In this part of the report there may be mentioned a curve which shows that since 1853 there has been a steady decrease in the mortality from phthisis in Massachusetts, the rate per 10,000 being 41·1 for the five-yearly period 1851–55 and but 23·6 for the period 1891–93. The mortality from phthisis in the dense districts being taken as 1000, that in the medium districts is found to be 810, and that in the sparse districts as 727. It seems, too, that the mortality from phthisis in Massachusetts diminishes in its ratio to the distance from the sea-coast.

The water-supply of Boston is the subject of a special report, and in it the Board state that they have taken as the assumption upon which to work the estimate that the

growth of Boston and the district surrounding it will continue at the same rate as it has done during the last twenty-five years. It is proposed to form a Metropolitan Water District containing a population of some 848,000. The Board report that they have found a thoroughly satisfactory supply for the district in question in the south branch of the Nashua River above the town of Clinton, and they point out that should further supplies be needed at a future date they can be easily procured. A considerable portion of the Massachusetts report is taken up as usual with the advice given by the Board to cities or towns which are about to establish works of water-supply or sewerage. It is one of the statutory duties of the Board to from time to time consult with and advise authorities, and in the execution of these duties much valuable experimental work is conducted by the Board. For instance, even in the ordinary routine work of the year there have been no fewer than 2006 samples of water examined chemically and microscopically, while much has also been done in the connexion between the odour and taste of waters and the organisms contained in them. Dr. Thomas Drown, the chemist to the Board, has done good work with regard to the composition of deep well waters in Boston and its vicinity, whilst Dr. Sedgewick, the Board's biologist, and Mr. Prescott, S.B., have contributed a valuable and useful paper on the bacteria contained in certain ground waters, including deep wells, in which they have demonstrated that these waters are by no means as free from bacteria as has generally been supposed. The writers show that even deep tubular well waters are not free from bacteria, and they promise in a subsequent paper a report upon the probable source of the bacteria and the species present. It seems, however, that but few liquefying colonies presented themselves and that there was an abundance of chromogenic organisms, facts which, as they point out, tend to strengthen faith in waters of this description. Many of our readers are probably familiar with the extremely valuable work done by the Massachusetts Board in connexion with the purification of sewage and water at the Lawrence Experimental Station, and they will be glad to hear that these experiments have been continued during 1894 and that the results are set forth in the volume under review. It can only here be stated that the experiments include investigations upon the composition of sewage, of the effects of precipitation and sedimentation upon bacterial purity, and of the influence of sewage composition and of temperature upon nitrification. The effects as regards water filtration of using coarser filters at high rates of filtration and the bacterial effects of such treatment have been gone into, and there is also a valuable paper by Mr. Clarke on the physical and chemical properties of sand in relation to the filtering of water.

## THE MAUSER RIFLE IN THE CUBAN WAR.

DR. ENRIQUE PEDRAZA, a Spanish military surgeon, contributes to the *Revista de Ciencias Médicas* of Havanna an interesting article on the effects of the Mauser projectile as seen by him in the present war. He points out the great difference which exists between this and the older forms of projectile as the Remington and Freire Brul. These latter being much larger and having a smaller initial velocity cause large openings and carry septic materials into the wounds they make which are therefore very difficult to render aseptic on the field and consequently when they come under proper treatment in a hospital are in a condition which is very difficult to manage, especially when, as is frequently the case, the hæmorrhage has necessitated the use of perchloride of iron which increases the size of the wound or when a bone has been hit, and, as usually happens, even at distances of 100 or 150 yards, is shattered.

The Mauser projectile as issued in the Spanish Army is 3 centimetres in length and 7 millimetres in diameter, and consists of a hard nucleus of lead and antimony coated with steel, outside which is a coating of nickel and copper alloy, the whole weighing 13·7 grammes and having an initial velocity of 632 metres per second, which enables it to pierce a Krupp steel plate 10·5 millimetres in thickness at a distance of 50 metres. Such a projectile ought, it might be thought, to produce a clean and minute wound with little hæmorrhage, easy to close on the field and therefore likely to heal rapidly in hospital, more especially as the bones would be bored rather than shattered and as there would be little chance of foreign matter being introduced into the wound by the projectile itself. These expectations are, however, by no means always realised, and the first few cases of primary wounds from a Mauser projectile which Dr. Pedraza saw at Manzanillo very greatly surprised and disappointed him. With longer experience, however, he learned that the benign results he had expected to see do occur, but only when the enemy is 150 yards or more distant. When the patient is shot at from 10 to 70 yards the destruction of the tissues is very great, and it is this that has given rise to the suspicion that explosive bullets were being used, especially as the orifices of entrance and outlet are sometimes so small that they can scarcely be seen. The explanation suggested is that the shock which the enormous velocity of the projectile produces on entering the soft parts causes them to behave as a fluid or semi-fluid does when enclosed in a box and "shot through," the hydraulic pressure bursting the sides, or, if an opening be left, driving a column of the fluid through it. As to how far any destruction of the projectile itself may be a contributing factor he has no direct evidence, but from specimens he has seen of the Wagner and Mannlicher projectiles after experiments made by Dr. Cardenal, which he showed at a lecture before the Cataluna Academy of Medicine, he thinks it probable that the projectiles do become more or less disintegrated when they hit at short distances.

In striking contrast to such wounds are those produced at 150 yards or more by the Mauser rifle. Here the entrance and outlet are very small and there is but little evidence of internal destruction, even bones being tunnelled through without fracture, and as aseptic treatment is possible from the first a rapid recovery may usually be anticipated. Thus, in one case where the projectile entered the abdomen in the eighth intercostal space on the right side, passing through the stomach, and coming out three fingers' breadth on the left of the sternum, though the ninth rib was fractured and the patient suffered from vomiting, hæmatemesis, and fever, he very soon improved and recovered completely. In another case the projectile entered the left frontal eminence, passing out by the right parotid region. The patient suffered from concussion of the brain, ecchymosis of both the right eyelids, with some difficulty of vision of that eye, but recovered in twenty-six days. If, therefore, it could be arranged that fighting should never occur at less than 200 yards distance the Mauser would, Dr. Pedraza thinks, be a most humane weapon.

## THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held on the 18th ult. at 25, Grosvenor-street, W., Mr. T. Holmes, Vice-President, being in the chair.

Mr. Percy Dunn, honorary secretary, reported that he had received a reply from the President, forwarded through the Secretary to the College, to the resolution passed at the meeting of the Committee on May 6th. The reply was to the effect that it had appeared to the President that the Committee had misinterpreted or had been misinformed as to the proceedings of the Council at the meeting in February, as no such agreement as that referred to in the resolution had been arrived at by the Council either at the meeting in February or at any subsequent meeting. It was decided that no action should be taken regarding this communication. With regard to the resolution of the Council of the College in favour of polling the Fellows on the question of the representation of the Members on the Council the following resolution was unanimously adopted:—"The Committee of the Association of Fellows, understanding that the Council of the College of Surgeons have nominated a Committee for the purpose of ascertaining the opinion of the Fellows on the question of the Members' representation on the Council, respectfully suggest the following as the points which should be submitted to each Fellow: 1. Are you in favour of giving to the Members direct representation on the Council? 2. If so, do you think

that such representatives should be Fellows only, or would you accept Members as representatives? 3. What number of such representatives would you admit? 4. Should they be in addition to the present Council?" A copy of this resolution was directed to be sent to the Secretary of the College with the request that it be laid before the Council at the next meeting.

It was also reported that the vacancies on the Council this year would be caused by the retirement of Mr. Cadge, Mr. Bryant, and Mr. Pick. It was understood that Mr. Cadge did not intend to offer himself for re-election, but that Mr. Bryant and Mr. Pick would again come forward. It was pointed out that Mr. Bryant had already served two consecutive periods of eight years each and had passed the chair and that the Association had advocated the ineligibility of Councillors for re-election after they had served two full periods of eight years. The results of such re-elections had not been at all satisfactory. The honorary secretary was instructed to communicate with Mr. Victor Horsley with a view to ascertain his intention as to becoming a candidate for the Council in July next. A similar instruction was given with respect to a provincial Fellow. A long discussion then followed regarding the action which it would be expedient for the Association to take in the event of certain other candidates coming forward. Ultimately the discussion was adjourned until the next meeting of the Committee.

## THE TREATMENT OF HABITUAL DRUNKARDS AND THE "CURATEL" PROCEDURE.

A MOST interesting report on "The Treatment of Habitual Drunkards in Austria and the 'Curatel' Procedure" has just been issued by the Foreign Office in its "Miscellaneous Series." From this report it would appear that very little legislation on the subject of drink and drunkards has actually taken place in Austria, drunkards only coming under the law in that country as "spendthrifts" or "idiots." The process of "Curatel," whereby the court appoints a curator or administrator for persons who do not look after their own affairs and who are unable to defend their rights, is made applicable not only to children, lunatics, and idiots, but also to those who, having been declared "spendthrifts" by a magistrate, have been deprived of the administration of their property. A man may be judicially termed a "spendthrift" if it appears on examination of the charge that he is running through his property in a senseless way and that he is exposing his family to future destitution by contracting loans under reckless or ruinous conditions.

In some kingdoms, as in Galicia and Lodomeria, there is a special law for the prevention of drunkenness, and one section provides that on being convicted of drunkenness three times in the course of one year, the district authorities may forbid the offender to visit public-houses or liquor shops in the neighbourhood of his domicile for the period of one year, under pain of fine or imprisonment. The inadvisability of mixing mere drunkards with the insane in asylums is fully recognised by the Austrian authorities. Last year a Bill for the erection of public asylums or establishments for the cure and reform of drunkards was brought into the Reichsrath by the Ministry of Justice. These institutions are intended for the reception of (1) those who have been judicially punished for drunkenness three times in the course of one year; (2) those mentally affected owing to habitual or periodical abuse of alcohol who have been admitted into hospitals or lunatic asylums and who, although they have recovered their sanity, have not sufficient self-command to resist the temptation to drink; and (3) those who, owing to habitual or periodical abuse of alcohol, endanger the moral, physical, or financial security of themselves or their relations. Provision is also made for the compulsory retention of patients for a period which may not exceed two years and placing the police and judicial authorities at the disposal of the administration of the asylum in order to recover fugitives from the same. Consideration is given to the proper safeguarding of the individual from the illegal and undue application of the various processes upon which detention in an asylum may be carried out.

The provisions of the Bill are worked out very much upon the lines and recommendations of the Home Office Departmental Committee which sat in 1891-92, and we hope that with a judicious and firm application of the "Curatel" procedure not only will the unfortunate victims of this sad propensity hail the results with gratification, but the public also will be constrained to withdraw their dread "bogey" of "interference with the liberty of the subject" when they see what an influence for good the new procedure shows itself to be. After all, what sort of "liberty" is sottishness, and what sort of a "subject" is the habitual and reckless drunkard.

Voluntary inmates of these institutions for drunkards are to be on the same footing as those who are compulsorily placed in them.

## THE MIDDLESEX HOSPITAL.

THE quarterly general Court of Governors of the Middlesex Hospital was held on May 28th, Mr. T. W. Nunn, F.R.C.S., in the chair. Among those present were the Right Hon. Sir R. Thompson, K.C.B. (chairman of the weekly board), Sir A. T. Watson, Bart., Mr. F. Hoare, Lieutenant-Colonel T. Lambert Mears, Mr. J. G. Noel, C.B., and others. The report of the weekly board states that the building of the convalescent home at Clacton-on-Sea is progressing satisfactorily and that the home will be ready for occupation in July. A *fête* in celebration of this event will take place in the grounds of the hospital on July 1st and will be inaugurated by their Royal Highnesses the Duke and Duchess of York. It is estimated that the total cost of the convalescent home will be nearly £30,000, of which amount about two-thirds has already been paid from funds at the disposal of the Samaritan Fund, aided by an advance of £16,000 from the Spicer trustees on mortgage, and a loan of £2000 from the bankers. Allusion is made to the losses sustained by the hospital in the deaths of Baron de Hirsch, vice-president, and Mr. W. Debenham, for nineteen years a member of the board. To Mr. Debenham the credit of establishing the convalescent home must be in great measure attributed. The Right Hon. Viscount Gort has been elected vice-president, and Mr. F. Debenham has accepted the vacant seat on the board. The retirement of Mr. George Lawson from the active staff, after a service of thirty-three years, is announced, and his appointment as consulting surgeon recommended to the Court. Mr. Pearce Gould has been elected to the vacant office of surgeon. An important paragraph of the report bears on medical education. It states that "the Board are proceeding with the negotiations for the amalgamation of the hospital and medical school, and as soon as a report has been received from the subcommittee appointed to consider the financial clauses the board anticipate that they will be in a position to submit a scheme in a complete form for consideration by the Court of Governors." Dr. Arthur Robinson, late of Owens College, has been appointed lecturer on anatomy, and Dr. R. A. Young lecturer on physiology. The plans of the new cancer wing have been approved. After reference to other matters the report closes with a statement to the effect that during the quarter ending March 31st 487 medical and 599 surgical patients were treated in the hospital, 77 had died and 302 remained in hospital on April 1st. During the same period 10,477 patients were treated in the out-patient department, the total number of attendances giving an average of 305 patients seen daily.

## CONTRIBUTIONS TO THE NEW PHOTOGRAPHY.

WE continue to receive from week to week communications on subjects illustrating the value of the "x" rays in surgical diagnosis. In the main, however, the applications appear to be restricted to the examination of hands and limbs and no practical success appears yet to have attended the exploration of deeper parts, save in the work of Mr. William Turner, the Surgical Registrar of King's College, London. This gentleman has made some very interesting radiographs of joints and of the processes of union after

fracture among other things, and we shall publish his paper upon them shortly—next week if possible.

The General Electric Company of Berlin have effected an improvement in the Roentgen apparatus, so that it is now possible to observe peculiarities in the interior of the head and throat and especially the action of the lungs and heart by direct inspection with the fluorescent screen. This improvement is to be submitted for inspection to the Twenty-fifth Surgical Congress now sitting at Berlin, when Dr. Virchow, Sir Spencer Wells, Dr. Guyon of Paris, Dr. Ollier of Lyons, Dr. Antona of Naples, and Dr. Lange of New York are expected to be present.

Mr. F. C. Abbott has sent to us one of the best examples of the new photography applied to surgery that we have as yet seen. It is a photograph of a backward dislocation of the right elbow of a woman. Eight weeks before admission to St. Thomas's Hospital she injured the right elbow by direct violence. Her medical man at that time diagnosed fracture of the humerus and put the arm in splints. The arm subsequently swelled greatly and was treated at an infirmary by the application of an icebag. On admission to St. Thomas's Hospital, under the care of Mr. Bernard Pitts, the right elbow was found to be considerably swollen and thickened, the forearm was semi-flexed, and there was great limitation of movement. The diagnosis rested between fracture of the lower end of the humerus with backward displacement and a backward dislocation of the forearm, and at first presented some difficulty owing to the swelling. The photograph, which was taken by Messrs. White and Stanley Kent, at once made the diagnosis plain, the displacement of the humerus being shown with admirable clearness.

Mr. Basil Trevelyan sends us a successful photograph of the left hand of a patient who accidentally shot himself in the palm with a pistol. The photograph shows clearly the position of the bullet, although most careful exploration under an anæsthetic had failed to discover it. On cutting down at the place indicated in the photograph Mr. Trevelyan successfully extracted the bullet which was found to be resting upon the internal lateral ligament of the wrist-joint. The bullet had evidently glanced against the middle metacarpal bone and so was directed upwards and inwards for a distance of over three inches.

Mr. C. Coppinger sends us some photographs which are of interest because they were taken directly on prepared sensitive paper, and hence the bones appear white and not black as in most photographs hitherto taken. He does not, however, give details of the process as to the time of the exposure or as to the kind of paper used. He also encloses a print of a case of tuberculous dactylitis.

## A NURSING EXHIBITION.

THE idea of a nursing exhibition was a happy one, and Mrs. Bedford Fenwick, the editor of the *Nursing Record*, and those who have assisted her, are to be congratulated on the organisation of the exhibition, which opened at St. Martin's Town Hall, Charing-cross, on Monday last. Nursing as a profession is growing every year, and appliances for the care and comfort of the sick are daily increasing, but it is only the metropolitan nurse who has an opportunity of keeping pace with this increase, and her sister in the country knows little or nothing of the progress that is being made. In this exhibition the latest and most approved appliances for the comfort and welfare of the sick and injured are brought together and are likely to prove of great educational value to the nurse as well as to the general public.

One of the first things which will be noticed by the visitor is the effigy of a nurse on a Humber bicycle. This is exhibited by Messrs. Debenham and Freebody of Wigmore-street, Cavendish-square, by request, in order to show a special form of cloak for the use of district nurses who use the cycle in place of the somewhat expensive dogcart. Many of the exhibits are brilliant testimonials to the industry of the hospital nurses of the metropolis, who, amidst their arduous duties, have found time to construct models which exhibit in a very striking way the practical application of many of the appliances. Literature is represented by a selection of Messrs. Cassell and Co.'s publications relating to nursing and invalid cookery. Messrs. Maw, Son, and Thompson's exhibit of aseptic instrument cases occupies a prominent position in the large hall, and Messrs. Burroughs Wellcome & Co. have a notable display. Disinfectants and deodorisers are represented by Sanitas and the new non-poisonous "Electrozone," made from sea-water by electricity, the Arema Manufacturing Company, and the Red Cross Germicide Company.

The Frame Food Company have an interesting exhibit of their preparations, and visitors with a predilection for tasting can exercise their propensity both at this stall and that of Messrs. Stephen Smith and Co. of Bow, who dispense Hall's coca wine, and a new preparation of Liebig's extract of meat with malt wine. Messrs. Reynolds and Branson, Messrs. W. H. Bailey and Son, Messrs. Southall Brothers and Barclay, Messrs. Down Brothers, and Mr. J. H. Montague of New Bond-street have some useful appliances on view, and Messrs. Edward Cook and Company have a large exhibit of their toilet preparations. The Bovril Co., Messrs. Welford and Sons with their stand of sterilised and peptonised milks and Messrs. Cadbury Brothers are also represented. The Gorham Patent Bedstead Company, Ltd., give practical demonstrations of their ingenious invention and the Bed Support Company have on view their "Excelsior" bed supports. During the progress of the exhibition, which will remain open till June 13th, many popular vocalists and instrumentalists will appear; a conference of nurses will also take place and papers of interest to the nursing profession will be read.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5609 births and 3668 deaths were registered during the week ending May 30th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 18·5 to 18·1 per 1000, further fell last week to 17·6. In London the rate was 16·9 per 1000, while it averaged 18·2 in the thirty-two provincial towns. The lowest rates in these towns were 8·5 in Swansea, 12·3 in Leicester, 12·8 in Derby, 13·0 in Norwich, and 14·2 in Bristol; the highest rates were 20·7 in Liverpool, 20·8 in Hull, 21·8 in Oldham, 23·0 in Sheffield, and 24·1 in Sunderland. The 3668 deaths included 542 which were referred to the principal zymotic diseases, against 562 and 591 in the two preceding weeks; of these, 195 resulted from measles, 151 from whooping-cough, 67 from diphtheria, 54 from diarrhœa, 48 from scarlet fever, 27 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases was recorded in Brighton, in Blackburn, or in Halifax; in the other towns they caused the lowest death-rates in Swansea, Derby, and Bradford, and the highest rates in West Ham, Salford, Oldham, Hull, and Croydon. The greatest mortality from measles occurred in Huddersfield, Croydon, Manchester, Sunderland, Hull, and Oldham; from scarlet fever in Bristol and Salford; from whooping-cough in Croydon, Cardiff, Bolton, West Ham, Preston, and Salford; and from diarrhœa in Hull and Plymouth. The mortality from "fever" showed no marked excess in any of the large towns. The 67 deaths from diphtheria included 40 in London, 4 in West Ham, 4 in Birmingham, and 4 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 19 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, May 30th, against 15, 20, and 22 at the end of the three preceding weeks; 3 new cases were admitted during the week, against 5, 6, and 5 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2679, against 2527, 2539, and 2596 on the three preceding Saturdays; 297 new cases were admitted during the week, against 238, 293, and 305 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the four preceding weeks 292 to 217, rose again last week to 230, but were 44 below the corrected average. The causes of 47, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Bradford, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of

uncertified deaths were registered in Nottingham, Blackburn, Preston, and Hull.

### HEALTH OF SCOTCH TOWNS

The annual rate of mortality in the eight Scotch towns, which had been 19·3 and 19·2 per 1000 in the two preceding weeks, was again 19·2 last week, and was 1·6 per 1000 bove the mean rate during the same period in the hirty-three large English towns. The rates in the eight Scotch towns ranged from 14·3 in Greenock and 15·2 in Edinburgh to 22·5 in Dundee and 27·4 in Perth. The 560 deaths in these towns included 27 which were referred to whooping-cough, 20 to measles, 17 to diarrhœa, 10 to "fever" (principally enteric), 6 to scarlet fever, and 3 to diphtheria. In all, 83 deaths resulted from these principal zymotic diseases, against 72 and 82 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·8 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 38 and 29 in the two preceding weeks, further declined to 27 last week, of which 17 occurred in Glasgow, 4 in Edinburgh, 3 in Aberdeen, and 3 in Paisley. The 20 deaths from measles, were within one of the number in the preceding week, and included 19 in Glasgow. The deaths referred to different forms of "fever," which had been 4 and 6 in the two preceding weeks, further rose to 10 last week, of which 6 occurred in Glasgow, and 2 in Edinburgh. The fatal cases of scarlet fever, which had been 3 and 5 in the two preceeding weeks, further rose to 6 last week, and included 2 in Edinburgh and 2 Greenock. The 3 deaths from diphtheria corresponded with the number in the preceding week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 92 and 109 in the two preceding weeks, declined again to 97 last week, and were 21 below the number in the corresponding week of last year. The causes of 33, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 21·9 to 23·7 per 1000, further rose to 23·9 during the week ending May 30th. During the past nine weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 18·4 in London and 17·4 in Edinburgh. The 160 deaths registered in Dublin during the week under notice were within 1 of the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 5 and 9 in the two preceding weeks; of these, 5 resulted from "fever," 3 from diarrhœa, and 1 from scarlet fever, and not 1 either from small-pox, measles, diphtheria, or whooping-cough. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 3·0 in London and 2·3 in Edinburgh. The 5 deaths referred to different forms of "fever" exceeded by 2 the number recorded in the preceding week. The 3 fatal cases of diarrhœa exceeded the number in any recent week, while the mortality from scarlet fever corresponded with that recorded in the preceding week. The 160 deaths in Dublin last week included 26 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers returned in the preceding week. Four inquest cases and 4 deaths from violence were registered; and 53, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or more than 9 per cent., of the deaths in the city last week were not certified.

## THE SERVICES.

### ROYAL MILITARY TOURNAMENT.

THAT the Royal Military Tournament, under what is practically new management, is a success the announcement which was posted up in the Royal Agricultural Hall on Tuesday afternoon last fully testifies: "House full; every seat sold"; and in spite of the fact that Wednesday was Derby Day the Hall filled at both afternoon and evening performances. It is to be noted, too, that since the opening on Thursday, May 28th, the number of visitors exceeded those who visited the tournament on corresponding days last year. We, therefore, offer our congratulations to the members of the executive committee—Major-General Lord Methuen, C.B., C.M.G. (chairman) Colonel W. H. Mackinnon, A.A.G. (vice-chairman) Lieutenant-Colonel R. S. S. Baden-Powell, 13th Hussars; Major J. S. S. Barker, R.A.; Major Irvine, R.E.; Captain Bramhall, A.S.C.; Colonel E. Villiers, 1st Surrey Rifles; Colonel G. M. Fox (commandant); Lieutenant-Colonel E. Blaksley, R.H.A.; Lieutenant-Colonel E. W. D. Ward, C.B., D.A.A.G. (hon. treasurer); and to Major Eyre Crabbe, Grenadier Guards (hon. secretary)—on whom the responsibility for the excellent management mainly rests. It is also gratifying to know that under the presidency of the new Commander-in-Chief, Lord Wolseley, the proceeds of the tournament, which bid fair to be unprecedented, will this year be distributed among all the military charities and not given to one institution as hitherto, and that the naval charities will also receive a share. The object of the seventeenth Royal Military Tournament, as set forth in the general rules, is "to encourage and develop skill at arms in all ranks of Her Majesty's Regular and Auxiliary Forces and to benefit various military charities"; but incidentally it must be a powerful factor in popularising the various departments of the Services as well as in promoting true patriotic pride. This is particularly shown in the bursts of applause which usher into the arena each detachment which takes part in the brilliant pageant "Sons of the Empire." In this display it has been the endeavour of the committee to give some idea to the general public and to the world at large of the enormous reserves which lie ready for action behind our iron walls—our first line of defence—and also behind the comparatively small permanently armed force which is commonly accepted as the English army, and which guards 277 million British subjects in an Empire covering nearly nine million square miles. The pageant is divided into six divisions comprising representatives of the home army, Indian army, Canadian army, Cape army, Australian army, and Colonial forces. In addition to the various feats of skill, tent-pegging, lemon-cutting, heads and posts, &c., there is a musical ride by the Royal Scots Greys (who will give place to the 2nd Life Guards next week) and a musical drive by the Royal Horse Artillery. From a practical point of view nothing is worthy of greater praise than the display by non-commissioned officers from the gymnasium at Aldershot, of which Colonel Fox is Inspector. Wrestling on horseback, the melée, sword *v.* sword, sword *v.* bayonet, sword *v.* lance, &c., mounted and on foot or mounted *v.* foot, are received with the same applause that has always characterised these exhibitions. The display by the Queen's Own Hussars strikingly brings out the difference between civilised and uncivilised warfare in regard to the wounded. The closing item of the programme represents the storming of an Afghan fort and involves a display of all arms. The Royal Military Tournament will remain open till Thursday next, June 11th, but intending visitors will do well to book their seats at once, as many applicants for seats are now turned away daily. With regard to the medical and sanitary arrangements they are as perfect as circumstances will permit, and the comfort and welfare of the general public are well looked after. Next week we hope to refer to the medical aspects of the tournament in fuller detail.

### MOVEMENTS OF THE ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL A. ADAMS of the Madras Medical Service, Residency Surgeon at the Court of H.H. The Maharajah of Jodhpore, has reported himself at Netley to join the Class of Bacteriology in the Army Medical School.

### VOLUNTEER CORPS.

*Artillery:* 1st Kent (Eastern Division, Royal Artillery): Surgeon-Major R. R. Brown to be Surgeon-Lieutenant-Colonel. *Rifle:* 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: Surgeon-Captain W. G. Scott, M.B., to be Surgeon-Major. 3rd (Sunderland) Volunteer Battalion the Durham Light Infantry; Surgeon-Captain R. J. Burns resigns his commission. 3rd (The Blythswood) Volunteer Battalion the Highland Light Infantry: Surgeon-

Lieutenant J. S. McConville, M.D., to be Surgeon-Captain. 3rd (the Buchan) Volunteer Battalion the Gordon Highlanders: The undermentioned officers resign their commissions:—Surgeon-Captain A. Blackhall, M.D., and Surgeon-Lieutenant P. B. H. Macleod, M.B.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Stuart Oliver, gent., to be Surgeon-Lieutenant.

VOLUNTEER INFANTRY BRIGADES.

Aberdeen Brigade: Surgeon-Lieutenant-Colonel W. Paterson, 4th Volunteer Battalion the Gordon Highlanders, to be Brigade-Surgeon-Lieutenant-Colonel. Plymouth Brigade: Surgeon-Major J. R. Thomas, M.D., 4th Volunteer Battalion the Devonshire Regiment, to be Brigade-Surgeon-Lieutenant-Colonel.

THE SOUDAN EXPEDITION.

There has been little to chronicle regarding this expedition during the past week. It seems, however, that there are signs of a forward movement taking place shortly. We do not think that much, if any, weight should be attached to various rumours and reports about the movements or intentions of Osman Digna or of the Dervish forces, for there is really very little reliable information on the subject. In spite of the great heat the health of the Anglo-Egyptian troops continues to be excellent, and the fact is a very creditable one to the medical and other services concerned, for it speaks well for the hygienic, hospital and transport arrangements of the expedition. But it is well to remember that the severe strain and test will come later when really active operations have begun. The latest Anglo-Indian papers are full of news connected with the dispatch of the Indian brigade for Suakin, which, as we know, has since arrived at that station. Brigade-Surgeon-Lieutenant-Colonel Calthorp is the principal medical officer of the brigade, which has been accompanied by the 31st and 32nd Native Field Hospitals. It is possible that the hospital accommodation on shore will be supplemented by one of the transport ships acting as a floating hospital, but we believe the troops composing the Indian contingent prefer to be treated on land.

THE DISPOSAL OF REFUSE AND NIGHT SOIL IN INDIA.

As everybody knows the dry earth system and the use of different forms of trenches for the disposal of night soil by burial are commonly adopted in India. It has often been suggested that this was open to the objection that the buried animal refuse might not be thoroughly disinfected and purified by the action of the soil and sun before the desiccated matters became blown about by the wind, especially in the case of shallow trenches in a highly porous soil. We learn from the *Pioneer Mail* that of late years the Indian Government has been carrying out experiments for the incineration of night soil and its reduction to ashes. This would no doubt be an excellent plan, especially for hill stations in India, and three kinds of incinerators have been used. Our contemporary speaks of the pattern known as the Henry Campion Incinerator as, on the whole, the simplest, cheapest, and most satisfactory.

ROYAL VICTORIA HOSPITAL, NETLEY, VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies of the Volunteer Medical Staff Corps arrived at Netley on Saturday, May 23rd, for their annual training. The strength consisted of ninety-four non-commissioned officers and men under the command of Surgeon-Captain J. R. Renshaw. The other officers of the Companies present were Surgeon-Captain J. J. K. Fairclough, M.D., and Surgeon-Lieutenant A. Phillips, who were attached for duty respectively to the Medical and Surgical Divisions of the Royal Victoria Hospital. The Companies paraded daily at 6 15 A.M. to join the Medical Staff Corps parade and again at 8 40 for Hospital duties. The drills, &c., were arranged by the officer commanding and took place daily. The Companies paraded in drill order on May 29th, and were inspected by Surgeon-Lieutenant-Colonel B. M. Blennerhassett, A.M.S. The Companies left Netley on May 30th.

Examinations for twenty-five commissions in the Army Medical Staff and for twelve appointments in the Indian Medical Service will be held in London on Aug. 7th next and the following days.

John Alexander McMunn, M.D., Physician and Surgeon to the Royal Hospital, Chelsea, from Surgeon on Half-pay List, retires on retired pay.

Surgeon-Major James Magill, M.D., of the Coldstream Guards, is promoted to Surgeon-Lieutenant-Colonel.

# Correspondence.

**"Audi alteram partem."**

## "THE REGISTRATION OF MIDWIVES."

*To the Editors of* THE LANCET.

SIRS,—Dr. Fraser in his otherwise excellent letter published in THE LANCET of May 30th has fallen into one or two errors which require correction. He attributes the responsibility for the Midwives Registration Bill to the Midwives Institute. Now, Sirs, the Midwives Institute is not responsible for the measure in question. The Bill was promoted by the Midwives Bill Committee, a representative body principally composed of medical men and medical women. On this committee are two representatives of the Midwives Institute. These ladies have carefully avoided any interference apart from looking after the rights which midwives already possess. It is only fair to the Midwives Institute to make this statement, as it is receiving, and has received, a good deal of unmerited abuse. The promoters of the Bill have no objection to the Local Government Board as the supervising body under the State, but this Board is understood to be already overburdened with work. Its record, too, in respect to workhouse infirmary nursing seems to show that there is insufficient elasticity in it to make it a very suitable body for the governance of what Dr. Fraser calls "midwifery nurses." The principal difficulty, however, is that the Privy Council has imported itself into the matter on the initiative, not of the promoters of the Bill, as Dr. Fraser suggests, but of the Select Committee of the House of Commons on the Registration of Midwives. I do not propose to criticise in detail the points raised in the letter, most, if not all, of which have been at one time or another fully discussed by the promoters of the Midwives Registration Bill. I am only concerned at present to set Dr. Fraser right on certain questions of fact.

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS.

Midwives Bill Committee, Office, 12, Buckingham-street, Strand, W.C., June 2nd, 1896.

## IN PRAISE OF CYCLING.

*To the Editors of* THE LANCET.

SIRS,—As cycling in health and disease is being written about in medical journals perhaps THE LANCET would allow me to say that I have found the moderate use of the bicycle to produce the most admirable effects on young people, especially girls who spend the greater part of the day shut up in-houses of business and breathing in many cases a more or less vitiated atmosphere. "Spins" into the country when the labours of the day are over put strength, vigour, and vivacity into these young women, and the evening sun soon tinges their cheeks with the russet and ruddy hues of health. No doubt many people suffering from organic disease are benefited by judicious bicycle riding. I have a diabetic patient who lives in the country and visits me from time to time. In January of this year the specific gravity of his urine was 40 and he was looking and feeling very ill. A few days ago this patient called upon me and I was agreeably struck with his amended and robust appearance, and I was about congratulating myself on the effects the last mixture I had prescribed for him had produced when he informed me that the specific gravity of his urine was now 22, and that he had for some time left off taking medicine, had nearly eschewed the restricted diet, and had taken to the bicycle with energy. As to bicycles in present use, the chief complaint I hear about them is of their behaviour when ridden over a rough or cobbled roads. Then their bumpings and jarrings produce on their riders sensations of a painful and most disagreeable character. If this state of things could be remedied a boon of comfort would be conferred on

the bicycle-riding public. I had the pleasure of a conversation with four working men whom I met the other evening on a country road. Each had a bicycle of a bad description, and I was not surprised to hear from them that their mounts were rough in the riding and galled them awfully. Still, the machines were very useful to them, for they enabled the men to come into Lincoln to their work from a village six miles away in forty minutes which used to take them an hour and a half to walk. I am, Sirs, yours faithfully,

WILLIAM O'NEIL, M.D., M.R.C.P. Lond., &c.

Lincoln, June 2nd, 1896.

## "RATIONAL THERAPEUTICS AND COMMON REMEDIES."

*To the Editors of* THE LANCET.

SIRS,—In the interesting and instructive paper published in THE LANCET of May 30th, under the above title, Dr. Samuel West asks for instances in which iodide of potassium has caused stoppage of the secretion of milk, and he also speaks of this drug as an efficient galactogogue. I must confess that I have always considered it to be quite the reverse; and in cases where I have thought it advisable to recommend a nursing mother to wean her infant I have been in the habit of prescribing from fifteen to twenty grains of iodide of potassium, to be repeated two or three times at short intervals, for the very purpose of stopping the flow of milk, and with very satisfactory and speedy results. In this treatment I am only following that recommended in the text-books of Playfair and Galabin.

I am, Sirs, yours faithfully,

R. BRUCE FERGUSON, M.A., M.D. Cantab., &c.

June 1st, 1896.

## "THE CHURCH ANTI-VIVISECTION LEAGUE AND HOSPITAL SUNDAY."

*To the Editors of* THE LANCET.

SIRS,—We have reason to be very grateful to you for the increased publicity you have given to the circular of our committee by inserting it in your widely read journal. That you should, however, think it needful to ask for proof of the alienation of people from the Church by the attitude of, at any rate, a portion of the clergy on the vivisection question is a curious proof of what different circles we Londoners can dwell in. Of the feeling of which you seem altogether ignorant daily proofs are thrust upon me. I have, of course, no right in a public journal to mention without their consent the names of others in a matter concerning their spiritual life, but I can at least speak for myself. I am by this cause prevented from attending my parish church, where I should otherwise have been a regular worshipper, and have to go elsewhere to a church where I know the clergy to be anti-vivisectionists. Nothing (unless it be the attitude of many clergy at the time of the Eastern war) has ever been so great a strain on my faith as their indifference to this terrible sin, and I always carefully avoid as far as possible coming into contact with vivisectionist clergy, whether by contributing to their funds or otherwise, and I know I am but a fair sample of thousands in this. It is true that these clergy are generally unaware of the motives of our actions because respect for their sacred office seals our lips, but the fact remains all the same. Hardly a day passes without my coming across persons, both Anglican and Roman, who tell me how their faith has been strained, and, alas! too often weakened or destroyed. With your permission I will give a few typical instances out of the well-nigh countless examples which might be adduced. 1. A lady, very devoted to the services of a well-known Paddington church, told me recently she wanted to take a house in that neighbourhood in order to attend the church, but could not do so till she ascertained the views of the clergy about vivisection. 2. A regular and devout attendant at a well-known Kilburn church told me she had been obliged to leave and go to a church where the type of services was repugnant to her because the vicar of the former was not an anti-vivisectionist. 3. A lady in this immediate neighbourhood brought me in the winter an appeal she had received from the vicar of a North Kensington parish, saying she could not contribute unless he were an anti-vivisectionist. Unfortunately, I could give her no information on this point, but a little later he preached against vivisection and she then at once sent him a cheque. 4. Another North Kensington lady told me she had, alas! altogether given up attending church through having come across vivisectionist clergy. 5. A gentleman who writes the mystic letters M.D. after his name told me he hailed the existence of our society because he thought it would strengthen the faith of many waverers, and he mentioned that another anti-vivisectionist physician of his acquaintance had become almost an Unitarian on account of what he imagined to be the tone of the Church on this question. With regard to the theological argument in your article, I must confess I altogether fail to see how the extracts from St. Thomas Aquinas and St. Augustine support vivisection. It is an insult to common sense to assume that the right to kill and the right to torture are the same thing. A member of our league, already known to the public as an author, is preparing a catena which, when published, will conclusively show the real tone of Christian theology on this point.

I am, Sirs, yours obediently,

A. L. WOODWARD,

Hon. Sec., Church Anti-vivisection League.

Lancaster-road, W., May 29th, 1896.

*** We publish this letter with great pleasure: first, on account of the motto at the head of our correspondence column; and, secondly, because it is interesting to see the ideas that some people have as to what constitutes "proof." It is a little hard upon Ladies 1 and 2 to assume their alienation from the Church. The Church is not a building. As to Nos. 3 and 4 we would direct the writer's attention to the twenty-sixth of the Articles of Religion.—ED. L.

## "THE USE OF GUAIACUM IN THE TREATMENT OF CHRONIC GOUTY AFFECTIONS."

*To the Editors of* THE LANCET.

SIRS,—In the report of my observations at the Royal Medical and Chirurgical Society on Sir Alfred Garrod's paper on the Use of Guaiacum in the Treatment of Gout reference is made to a local method of treating the acute manifestation of this affection which I have employed with success. With your permission I will give the formula in full. I take half an ounce of iodide of potassium, dissolve it in half a pint of rectified spirit—methylated spirit is used in hospital practice—add one ounce of soap liniment, and then half a drachm each of oil of cajeput and oil of cloves. A piece of lint is soaked in this mixture, wrapped round the affected part, covered with protective and kept in place by a bandage. It acts as a powerful counter-irritant, and the inflammation usually subsides in from twelve to twenty-four hours. In addition I not uncommonly give a drachm of colchicum wine with ten grains of iodide of potassium three times a day. These large doses of colchicum wine induce brisk purgation, sometimes accompanied by vomiting, but they speedily cut short the attack. This mode of treatment is especially useful in the case of robust, full-bodied men in active employment, to whom the loss of a day's work is a serious consideration. In sciatica, lumbago, and rheumatism affecting one joint the local application of a liniment containing half an ounce of salicylate of sodium, half a drachm of oil of cajeput, fifteen minims of oil of eucalyptus, and half an ounce of soap liniment in six ounces of rectified spirit affords prompt relief.

I am, Sirs, your obedient servant,

Welbeck-street, W., May 31st, 1896. WILLIAM MURRELL.

## "NERVE GRAFTING FOR INJURY."

*To the Editors of* THE LANCET.

SIRS,—My attention has just been drawn to your notice in THE LANCET of March 7th, 1896, of the case of nerve grafting for injury which I reported in the *Medical News*. As I believe I stated in that report, the man was discharged the service of the army because of this disability. After the report was published and about five months after operation I received a letter from him asking aid in securing a pension. In this communication he stated that there had been no improvement resulting from the operation. Interested as he was in obtaining a pension it is barely possible that had there been any improvement he would have concealed it, but from what I know of the man I believe he is honest in his statement. The time which had

elapsed (five months) has proved in some similar cases too short a period for return of function. Technically the operation was successful, and I still have some hope that eventually function may be restored. I can see no reason why if success should ever result in similar procedures it should not have been achieved in this case. I am prompted to make this communication in view of your closing remark in the notice in your issue referred to: "It would have been very interesting to know whether any improvement resulted from the procedure."

I am, Sirs, yours faithfully,

A. E. BRADLEY,
Captain, Medical Department, United States Army.

Fort Yellowstone, Mammoth Hot Springs, Yellowstone National Park, Wyoming, May 18th, 1896.

## THE DUNBAR WATER-SUPPLY.

*To the Editors of* THE LANCET.

SIRS,—So many letters have reached me from various quarters inquiring about rumours regarding Dunbar water-supply and an alleged fresh outbreak of typhoid fever that I shall be much obliged if you will make public the following facts. All such rumours are absolutely false. The old water-supply is entirely cut off, so that it is impossible for any of it to be used. The new water-supply is perfectly satisfactory and the water has been certified to be of the most excellent quality. There has been no case of typhoid fever notified since Feb. 4th last, and, indeed, Dunbar as a rule is conspicuous by its freedom from infectious disease of any description. Intending visitors, therefore, can come to enjoy Dunbar with full confidence in its safety as one of the healthiest seaside resorts in the country.

I am, Sirs, yours faithfully,

G. T. SINCLAIR, M.D. Edin.,
Dunbar, June 1st, 1896. Acting Medical Officer of Health.

## THE ARMY MEDICAL STAFF.

*To the Editors of* THE LANCET.

SIRS,—Will you permit me to urge on the "second-rate and inferior" members of the profession to seize this favourable opportunity to enter the Army Medical Staff? Within a few years they will equal in professional knowledge the *superior* men and far surpass them in the knowledge of the world. In the army there are disadvantages, but they are few and insignificant as compared with the marked and numerous advantages of service in the Army Medical Staff. The pay is good, better than the remuneration in private practice; the work is less arduous and more pleasant, the worry and anxiety are less, the taskmasters are fewer, holidays are more certain and more frequent, friends are more easily made, jealousy is almost unknown, the advantages of travelling at Government expense are not to be despised, and the opportunity of retiring and living a life of ease at a comparatively early age is not to be overlooked. I do not deny that the Army Medical Staff have grievances which the War Office authorities would do well to remove, but I do assert that, compared with the drawbacks and disadvantages of life in private practice, they are almost microscopic. As "Brigade-Surgeon, A.M.S.," and "Active List" have not signed their letters I conceal my identity under the disguise of

June 2nd, 1896. SURGEON-CAPTAIN, A.M.S. (Retired).

## "A DECEPTIVE ETHER INHALER."

*To the Editors of* THE LANCET.

SIRS,—As the original makers of Clover's ether inhaler we wish to deny the parentage of the inhaler mentioned by Mr. Paul. Many imagine that all Clover's inhalers are now manufactured by us, so that this disclaimer is necessary. We may mention that this is by no means the first case of "transposed viscera" that has come to our personal knowledge, and we cannot help thinking that, at any rate in this case, professional etiquette, which prevented our patenting this apparatus, has often brought a good and useful instrument into ill repute.

We are, Sirs, yours faithfully,

MAYER AND MELTZER.

Great Portland-street, W., May 30th, 1896.

## LEGISLATIVE PROHIBITION OF THE SALE OF ALCOHOLIC LIQUOR.

*To the Editors of* THE LANCET.

SIRS,—I have read with interest and profit the leading article in THE LANCET of May 30th on the above subject. Medical men see more of the terrible national disease, alcoholism, and are better able to judge of its causes and consequences than any one else. We ought, therefore, to be in a better position than other people to suggest the best methods for dealing with it. Indeed, intelligent legislators will naturally expect us to furnish them with information which shall guide them in framing laws dealing with the subject. Your article enables us to see what methods have been tried elsewhere, how far they have succeeded, and in what respects they have failed. It is evident that drastic laws, like drastic medicines, are likely to do more harm than good, since they generally lead to defiance and contempt of law. Hence, as you observe, "the policy of prohibition has been on the whole a decided failure," and that, on the other hand, "great success has attended prudent measures of regulation and repression." The zealous advocates of prohibition commit two errors. They underrate the importance of education and they overrate the power of law. Until far greater care is taken in the training of youth, until a far more intelligent system of education is adopted, one which shall develop in a balanced manner the physical, mental, moral, æsthetic, and religious faculties, widening, elevating, and beautifying the sphere of daily life, men will grovel within narrow limits and will seek for enjoyment in mere animal gratification. Now since alcohol engenders a sense of contentment and pleasure more readily than anything else which he can command the uneducated man flies eagerly to that, and if he has the means of purchasing the much-desired agent he will indulge therein. The craving for alcohol amongst the masses of the people is lamentably common. Restrictions will be tolerated, but the attempt to suppress the sale of the favourable beverages would excite fierce resentment. The cure for national intemperance must therefore be a gradual process depending on the more thorough education of youth on the one hand and gradually increased restrictive laws on the other.

I am, Sirs, yours faithfully,

Manchester, June 3rd, 1896. P. M.

## THE CHILDREN OF THE STATE.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of May 23rd you referred to a severe criticism upon the report of the Poor-law Schools Committee, and showed that those whose care of pauper children in the past had been so seriously called in question by the report were not content to sit down quietly under the stigma laid upon them by the conclusions of the committee. The feeling of hostility towards the tenor of the report is undoubtedly growing. I should like to direct attention to a report made to the Shoreditch board of guardians by their committee charged with the visitation of the cottage homes belonging to the parish of St. Leonard, Shoreditch, in which the contentions of the Schools Committee are referred to in very severe terms. The several points of which much is made in the Schools Committee's report are specially mentioned, and the construction placed on the evidence seriously called in question. Without going over the ground covered by the local committee I may say that their view is that the report of the Schools Committee is, in brief, a statement of conclusions arrived at prior to the taking of evidence, and is a founding of general impressions from isolated examples rather than a judgment based on comprehensive views of debatable matters. Too much, say the local committee, is made of the particular in the way of formulating therefrom recommendations to govern the whole. "Bias" is the term which the critics would apply to the report, and this in a direction hostile to the past action of the guardians and their officers. The improvement of the system hitherto in vogue with the advance of ideas is never acknowledged, and the too sweeping condemnation of the school system by reason of a few statements showing up its bad features in particular instances is held to be the fixed purpose of the departmental committee. One strong point put forward

by the local committee at Shoreditch is that the educational system as now practised has been shown by no less an authority than Mr. Lockwood, one of the inspectors of the Local Government Board, to have resulted in the absorption in the army of the respectable wage-earning classes of the country of almost the whole of the thousands upon thousands of pauper children who have in the past been under the care of guardians. The system of dealing with children in Shoreditch is shown to have anticipated many of the suggestions of the departmental committee and to be working well. The report is looked upon as reproducing too faithfully the views of its members as known prior to the appointment of its writers, while the manner of treating the evidence of witnesses, according as it did or did not fit in with these preconceived ideas, is referred to as a species of biased favouritism. The opinion, from a perusal of this criticism and of others, is that the idea prevails that the report and its recommendations go altogether beyond the ground covered by the evidence. In these circumstances it is pleasing for boards of guardians to be assured by none other than the Duke of Devonshire, as Lord President of the Council, that no action will be taken with a view of adopting the recommendations of the committee before plenty of opportunity has been given for the voicing of the feelings of those at present charged with the administration of the laws touching pauper children and the manner of the upbringing and education of these children. If the departmental committee have in any wise overstepped the bounds of general fact and dealt with points only from the view point of individualism their case will be weakened wherein they seek to show the absolute necessity for reform in the direction of taking pauper children out of their present sphere and of placing them in London under one central authority.—I am, Sirs, yours truly,

OLIVER TWIST.

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

*Dr. Niven on Sanitation among the Manchester Jews.*

THE twelfth annual meeting of the Manchester Jewish Ladies' Visiting Association was held on the 21st ult. in the town hall. The report stated that the work of the association was energetically carried on; that 225 houses on an average were visited every week; that besides offering such suggestions as might promote cleanliness in the homes of the poor the district visitors distributed carbolic powder and had sold 20 cwt. of carbolic soap, besides supplying materials in order to enable the poor to carry out the requirements of the Health Department of the corporation as to cleansing their houses. The financial statement was satisfactory. In moving the adoption of the report Dr. Niven said "the condition of health of the Jewish community in Manchester offered a very interesting and pleasant spectacle." Year after year the death-rates in the Jewish quarters offered a striking contrast to those of neighbouring districts. The death-rate for the first quarter of this year was 17·3 in Red Bank and 18·5 in Strangeways. They are inhabited chiefly by poor Jews and contrast strongly with the adjoining district of Angel Meadow with a death-rate of 50·9, and with St. George's Central and Ancoats West districts with rates of 39·2 and 42·0 respectively. It was no exaggeration to say that the Jewish community presented a death-rate less than half that of some of the neighbouring districts. While it is difficult to understand all the factors helping to produce the contrast, probably the most important are the prevailing temperance and, perhaps even more, the great care which the Jewish people take of their children. Dr. Niven, so far as his inquiries went, thought they were probably better clothed, fed, and cared for than the children in many other parts of Manchester. He believed that the Jews in their polity looked to the mothers staying at home to take charge of the children while the men went to work. As is well known, it is the custom for a very large proportion of the non-Jewish mothers to go out to work, leaving their children in the care of others. "It was interesting to find that the death-rate as regarded children was low among the Jewish community where the mothers stayed at home and looked after their children, and so high in neighbouring districts, where so many mothers went to work, leaving their children to the care of others." He could not think economically that the Lancashire custom for the mothers to go out to work was a good one, and the contrast as to death-rate was interesting because it was in spite of what we rightly lay stress on—i.e., the want of cleanliness among the poor Jews. "He did not think any of the Jewish people would claim—and especially those who had recently come from abroad—that they were more cleanly and nice in their habits than others. ..... They were in many respects extremely slovenly and dirty in their habits, and effluvia which arose from decaying vegetables and from the extraordinary cooking operations which went on in the houses were in many respects often very disagreeable." He spoke also of the poor Jewish people being "more apt to accumulate dust than their neighbours," a pleasing and delicate euphemism, and dealt very tenderly with the frightful proclivity to dirt that seems ingrained in most of the poor Jews. The strange thing is that they flourish in spite of their habits and surroundings, which seems to point to great racial vitality. They no doubt owe much to their temperance as to alcoholic drinks, while as to food they are not frugal, but rather lavish, and though their cooking is peculiar and not always as cleanly as we should like their rich, greasy messes seem to suit them.

*Milk Adulteration.*

Some cases involving points of interest under the Food and Drugs Act were heard at the city police-court on the 21st ult. An inspector took a sample of the milk sold by a small shopkeeper and it was found to have been deprived of fat to the extent of 27 per cent. The shopkeeper declared he sold it exactly as he received it from a wholesale milk dealer. A sample of milk sold by the latter had been deprived of 26 per cent. of fat. The wholesale dealer in turn declared he sold it as he received it from the farmer. Samples, therefore, were taken on different occasions of the farmer's milk as it was delivered at the station, which, according to the analyses of Mr. C. Estcourt, the city analyst, "had been deprived of fat to the extent of from 16 to 45 per cent." The analysis of Mr. Charles Blades, a member of the Society of Public Analysts, produced very different results, and it was agreed that the summonses should be adjourned for a fortnight to allow of these gentlemen making a joint analysis. It should be said that two inspectors went to the farmer and asked for a sample of the milk as it came from the cows, but he would not allow them to have it until it had passed through the refrigerator. In the second case the retail dealer and the wholesale dealer declared they had sold the milk, which had been deprived of much of its fat, as it had been delivered to them, and a sample taken of the milk as it was supplied by the farmer showed that 32 per cent. of the fat had been removed. The defending solicitor contended that the milk-dealers had combined to throw all the blame on the farmers and complained that the inspectors attached to the sanitary department of the town hall took advantage of "the poor unsophisticated Cheshire farmers"; notwithstanding which touching appeal the farmer was fined £5 and costs and the summonses against the dealers were withdrawn. Three other milk retailers were fined for adding water.

*Summer Camp for City Boys.*

Ever since 1883 a camp for poor city boys has been formed each summer as part of the work of the Boys' Refuge, a most valuable Manchester charity. The first year it was at Morecambe, and since then at Llandudno, Ansdell near St. Anne's, and for the last three years at Birkdale, Southport, where the camping-ground has been placed at the disposal of the committee by Mr. Wild-Blundell, the lord of the manor. It is on sandy soil, is near the railway-station, and only a few minutes from the sea. The camp is formed at Whitsuntide and continued to the end of the summer, during which time batches of poor boys, about 120 at a time, are kept under canvas for seven days, being replaced every Monday by a fresh contingent. Last year 1461 boys had a week's holiday, and it is hoped that this year 1500 may be received. The movement is helped by many philanthropic people. A large corrugated iron structure, known as Byrom Hall, has been given by a lady and gentleman of that name from Bury, which is of great use in bad weather, and many of the tents have been supplied by friends. "In this and other ways—by gifts offered, camp equipment, &c.—the cost of maintenance is sensibly reduced, and with the sums contributed annually by the lads the committee are enabled to provide for them a very enjoyable and health-giving summer holiday at a cost of 6*s.* each per week." A sergeant and his wife, with the help of one or two junior

officers, look after the boys, and members of the committee go down from time to time. The city missionaries, district, visitors, and others interested in the poor find plenty of deserving cases, and the candidates are always in excess of the accommodation. While under canvas a sort of uniform is worn, which identifies the boys as belonging to the camp, and allows of the fumigation and storing of the temporarily discarded clothing. Before leaving Manchester the boys are medically examined by Dr. Ledward, and while they are under canvas by Mr. Reinhardt Anderson of Southport, the honorary medical officers. Ten or twelve are allotted to each tent. The bugle-call for rising is at 6.30, then come a brief drill, prayers, and breakfast at eight. Tents are then swept out and cleansed, after which, if the tide serves, the boys parade for bathing. Dinner is at 12.30, tea at 5, supper at 9, and after prayers, which cannot be of excessive length, the lads go to their tents at 9.30. The time passes with a little drill, various games, and rambles along the shore, a blissful change from the stifling slums and alleys of Manchester on a hot summer's day. The food is good and substantial and there is no stint. At the recent opening for the season by the Mayor of Southport many friends were present, who could not fail to be touched by the appearance of these lads from the slums. Some few seemed robust, but the great majority showed in their pale faces and stunted growth the degeneration of race, in the production of which the unhealthy conditions of life in the low districts of our large towns are important factors.

June 2nd.

## SCOTLAND.

**(FROM OUR OWN CORRESPONDENT.)**

*Proposed New Asylum for Pauper Lunatics.*

As a result of a conference between representatives of the parish council and the Lunacy Board it has been agreed that the parish council will be under the necessity of providing a new asylum to accommodate pauper lunatics to the number of 400 or 500. The present asylum at Morningside is able to deal with only about one-third of the number of lunatic paupers, which are under the care of the parish council, hence the necessity for additional accommodation. It is expected that the building connected with this scheme will necessitate an outlay of at least £50,000. The question of a site for the new asylum has still to be considered.

*Health of Edinburgh.*

At a meeting of the Public Health Committee it was reported that the number of deaths during the month of May was 353, giving a death-rate of 15·31 per 1000. The average death-rate for the preceding five years was 17·31 per 1000. Zymotic diseases had proved fatal in 6·51 per cent. of the total mortality.

June 2nd.

## IRELAND.

**(FROM OUR OWN CORRESPONDENTS.)**

*The Irish Medical Association.*

AT the meeting of this association, which was held in Dublin on June 1st, a strong opinion in favour of the extension of the English Superannuation Measure to Ireland was expressed by many of the speakers. Mr. Horace Plunkett, M.P., with Dr. Jacob, the secretary of the association, have been very active in the matter, and there seems to be some hope that a Bill embodying an arrangement by which a superannuation allowance would be secured to retiring Union medical officers may be passed this Session.

*The Royal College of Surgeons in Ireland.*

The annual meeting for the election of the President and Council of the College took place on June 1st, when Mr. William Thomson and Mr. Kendal Franks were elected President and Vice-president respectively for the ensuing year. The only changes which have taken place in the *personnel* of the Council are indicated by the disappearance of the names of Mr. William Stoker, who resigned his seat in May in order to become an examiner, and of Mr. Cranny, who was elected on that occasion to fill his place. Sir W. Thornley Stoker, the outgoing President, and Sir William Stokes, recently one of the examiners in surgery to the College, occupy the two vacancies. The new Council will be obliged to deal with a very unpleasant matter in the shape of a movement which has taken place in the medical school of the College in reference to the recent election of Dr. E. Winifred Dickson to the position of examiner in midwifery and gynæcology. The students have held a meeting, and in addition to a request for Miss Dickson's resignation have threatened that unless their demand is complied with they will leave the school and College to obtain their qualifications elsewhere. Dr. Dickson, who is gynæcologist to the Richmond Hospital, is, of course, highly qualified for the post of examiner. The wisdom, however, of the College in appointing any young lady to examine young medical students in midwifery and obstetrics is considered by many to be open to question.

*Death of Mr. Robert Gilmer, L.R.C.P. & S. Edin.*

I regret to announce the death, on May 24th, at his residence, Ballymena, of Mr. Robert Gilmer, in his fifty-first year. He has been ailing for several months, so that death was not unexpected. Mr. Gilmer studied in Belfast and after becoming qualified began practice in Ballymena, where for the past twenty years he has enjoyed the respect and confidence of a large *clientèle*. The greatest sympathy is felt for his wife and family in their very sad bereavement.

*The Condition of the Belfast Workhouse.*

Mr. Agnew, Local Government Board inspector, in his report on the condition of the workhouse in Belfast, states that the accommodation for the infirm classes, both male and female, is inadequate and inefficient, particularly for the infirm women, a number of whom were located in sheds used as living and sleeping rooms. In the school building the day-room accommodation for the male attendants is inadequate, while the women had no day-room at all. The inspector recommends that structural changes should be made to meet the wants of these classes. In the healthy nursery, where 50 mothers and 59 children were located, there was no bath or lavatory accommodation. There was also no lavatory accommodation for a large number of healthy men and women. The inspector suggested that structural changes were necessary in the infirmary so as to provide separate wards for phthisical and erysipelas patients. The water-supply in the infirmary was inadequate. The school-yard was in a discreditable condition. At the meeting of the board of guardians, held on May 26th, a committee was appointed to consider this report of the inspector.

*Queen's College, Belfast.*

Dr. Whitaker, medical officer of health for the city of Belfast, has been appointed lecturer on Sanitary Science at Queen's College, Belfast.

*Presentation to Mr. John Wilson.*

Mr. John Wilson, recently appointed medical officer of Enniskillen Union, after having been for a period of sixteen years dispensary medical officer of the Barronstown district, co. Louth, was last week presented at a meeting in the Dundalk Club with an address and purse of sovereigns. The presentation was made by members of the medical profession, the hunting men of the district, his former patients, and by the general public.

*The Queen's College Union, Belfast.*

At a meeting of the General Committee of the Students' Union, held at Queen's College on May 29th, it was reported that the new union buildings were progressing rapidly, and that financially, after paying for the erection and furnishing of the union, there would be about £1000 over for investment. The draft constitution was considered and adopted, and the bursar of Queen's College was appointed auditor. It is expected that the new union will be ready next session, and as early in the coming year the jubilee of the College is to be celebrated this would be a very suitable occasion for the public inauguration of an institution which will serve as a bond of union between students, graduates, and officials of the College.

*Hospital Saturday in Belfast.*

The annual street collection on behalf of the Royal Hospital was taken up in Belfast on May 30th, and, despite the beautiful weather and the large number of collectors, who threw themselves most energetically into their work, the

amount collected was less than last year by about £50, so that when necessary expenses are deducted there will only be a sum of £230. The movement, judging by results, is not increasing in popularity; and amongst many the feeling is growing that the hospital must be put on the city rates as, unlike the similar charities in Dublin, it is not subsidised by the Government contributions. One reason why less interest is being taken in the Royal Hospital is undoubtedly the large number of smaller charities of every kind which have in recent years sprung up all over Belfast and which take many of the old hospital subscribers.

*The Health of Belfast.*

The report presented to the City Corporation on June 1st by the medical officer of health shows that the condition of Belfast from a health point of view is most unsatisfactory. For the five weeks ending May 23rd the death-rate was from all causes 26·9 per 1000, while in Dublin it was 24·8, and in Cork 18·9; in Belfast the death-rate from zymotic diseases was 3·6, while in Dublin it was 1·6 and in Cork 0·1; in Belfast from chest affections it was 9·6, in Dublin 7·6, and in Cork 7·0. Various theories are put forward to account for the continued extraordinary high death-rate in Belfast; it is said, for instance, that the death-rate is calculated on a population of 277,354, which is much too low, as the probable present population is close upon 300,000; again, it is said to be due to the large pauper population, to the nature of the soil, or to the character of the manufactures, and to the absence of notification of disease; but in the discussion in the Corporation on the question it was pointed out by one of the members that the matter could not be dealt with by such generalities, and that it would be infinitely better if the members of the public health committee would go to the root of the matter and ascertain what was the real cause of the undoubtedly high death-rate of the city. Some progress has been made in reference to the long-talked-of erection of an infectious hospital, and the public health committee have selected two sites as suitable—one at Old Park-road and the other in the asylum grounds at Purdysburn. There is one slight morsel of comfort in that the birth-rate of Belfast is the largest of any district in Ireland. One thing is quite evident, the death-rate of Belfast is exceptionally high, the causes of which should be found out and removed. Birmingham affords a notable example of what can be done in this direction.

June 2nd.

## PARIS.

### (FROM OUR OWN CORRESPONDENT.)

*The Craving for Salt.*

IT may seem strange that this well-worn subject should at the close of the nineteenth century be discussed at the Société de Biologie (May 23rd). M. Lapicque, after reminding his audience that chloride of sodium is consumed as an article of necessity by nearly all races and that most of the lower animals are fond of it, tells us that there are, however, exceptions to this rule. The herbivora betray a greater liking for the salt than the carnivora, and in the same way agricultural populations, who are more or less vegetarians, are invariably large consumers of it. The tribes who eat no salt lead a pastoral or nomadic existence whose regimen is almost exclusively animal. This led Bunge to formulate the theory that as vegetables contain principally potassium salts these latter replace the sodium salts in the economy, and the vegetarian instinctively craves for common salt in order to compensate for its loss through the kidneys. This theory is, however, weak, for it does not explain why certain peoples who have not access to sea salt replace it by salts of potassium obtained by the incineration of plants. Such a people are the negro inhabitants (1,000,000) of the French Congo between Lake Sangha and Lake Tchad. Salt is unknown in this vast territory, which is as large as France; for it is substituted an artificial salt extracted from a certain number of selected plants, whose ashes are washed and their potassium salts crystallised out. Samples of the salt have been analysed and found to be composed of potassium salts only. When on their first entrance into the country the French endeavoured to sell common salt they found it unsaleable, the natives preferring their own. This disposes of the theory propounded by Bunge, and to my mind weakens another theory advanced by Ringer and others, claiming for potassium salts the property of a protoplasmic poison and cardiac depressant. M. Lapicque inclines to the belief that salt is only of use in procuring for man and animals a gustatory stimulus. M. Trouessart reminds us that dearth of salt in besieged cities has been made up by the use of saltpetre. M. Giard told his colleagues the story of the chimpanzee of the London Zoological Gardens which, deprived of salt, took to drinking its own urine. As soon as it was provided with a block of bay salt it ceased to drink its urine and used to sleep with the salt held tightly in its arms. According to M. Samson oxen and sheep will on large farms abstain for weeks together from the salt placed within their reach, whereas at certain other periods they eat largely of it. This variability of appetite for salt is due to the variation, according to the season of the year, of their diet.

*A New Method of Treatment by Heat of Soft Chancres.*

Dr. Audry of the Toulouse Faculty has devised a modification of the heat treatment of soft chancres introduced three years ago by Dr. Welander of Stockholm. Dr. Audry employs radiant heat supplied by the thermo-cautery, the button of which is held for a few seconds at a distance of three or four millimetres from the sore previously washed and dried. Should the point of the thermo-cautery be fine it must be brought to a white heat; if larger, to a dull red heat. Exposure to this radiated heat for the period indicated has the effect of thoroughly drying the ulcer, on the edges of which there now appear sanguinolent striæ. Too long exposure determines a raising of the surrounding epidermis and a reddening of the skin. A single *séance* is stated to be usually sufficient to transform the chancre into a simple ulcer, which soon cicatrises under the influence of any antiseptic powder. The rapidity of the healing is due to the absence of the scab that always follows the direct application of actual or chemical heat. The pain is said to be quite endurable, being less than when the actual cautery is employed.

*The late Dr. Stoltz.*

The death on May 22nd, after a very short illness, of Joseph Alexis Stoltz deprives French obstetric medicine of one of its chief celebrities. Born in 1803 at Andlau in Alsace, his father being an *officier de santé*, he studied at Strasbourg, graduating M.D. at the age of twenty-three years. He at once selected obstetrics and gynæcology as his special studies. Appointed *professeur-agrégé* in 1829, he became five years later Professor of Obstetrics of the Strasbourg Faculty and Director of the Departmental Midwifery School. In 1846 he was appointed Dean of the Faculty. He was a *membre associé national* of the Paris Academy of Medicine. Commander of the Legion of Honour, and had filled the offices of member of the Municipal Council of Strasbourg and member of the Conseil Général of the Bas-Rhin. Opting for France after the catastrophe of 1870 he followed the Faculty of Strasbourg in its migration to Nancy, where he retained the same posts of Professor and Dean. There he remained until 1880, when he retired to his native place, Andlau, picturesquely situated at the foot of the Vosges. Here he became the Good Samaritan of the district, nor did he refuse an occasional consultation.

June 2nd.

## BERLIN.

### (FROM OUR OWN CORRESPONDENT.)

*The Official Report on the Langerhans Case.*

THE death of a child after an injection of diphtheria antitoxin, which I reported lately in these columns, has induced the legal authorities to order a careful examination of the serum used in this case. The examination was performed by Professor Ehrlich, Director of the Royal Control Office, and the results are now published in the official papers and in the *Berliner Klinische Wochenschrift*. The report states that the serum before being admitted to sale had been tested (by control experiments) according to the existing regulations by the office. The serum, then registered under No. 216, showed 100 immunisation units per cubic centimetre, and absolute sterility and the normal quantity of carbolic acid. After the fatal accident the antitoxin No. 216 was again tested and proved to be quite unaltered. By careful inquiries in those hospitals where other bottles of the antitoxin No. 216

had been sent (Charité Hospital, Berlin; Julius Hospital, Würzburg; General Hospital, Hamburg; and municipal hospitals in Magdeburg and Krefeld), it was ascertained that in no instance had unfavourable symptoms been observed. In one of these hospitals a tenfold dose was administered to a boy one and a half years of age without any harm resulting; in another of them a series of children received injections for immunising purposes and remained quite healthy. The report concludes that from a clinical as well as from an experimental point of view the serum No. 216, used in the Langerhans case, must be regarded as a normal one. The death of the child is, therefore, not to be imputed to the antitoxin.

*Hygiene in Printing Offices.*

A Bill providing for hygienic improvements in printing offices has been proposed to the Federal Council by the Imperial Chancellor. It specifies that the rooms of the offices must be 4 metres (= 13 feet) in height, and must contain at least 15 cubic metres (= 530 cubic feet) of air for every man employed therein. The floor must be smooth, and the walls must be painted with oil paint renewed every five years. The type cases must be provided with pedestals to avoid the accumulation of dust beneath them. Stereotype work is to be done in special rooms efficiently ventilated. The type cases are to be cleaned in the open air and by the aid of bellows only. Ample lavatory accommodation is made compulsory by the Bill, which gives very precise directions in this matter. One washhand basin at least must be furnished for each five workmen, soap and towels are to be supplied to them free of charge, and a cloakroom separated from the workrooms is to be provided. This Bill, which is viewed very unfavourably by the employers, is on the other hand declared by competent medical men to be very useful. Dr. Lewin, a Lecturer on Toxicology at the Berlin University, points out that whilst the German insurance laws oblige employers' associations to indemnify workmen in case of accidents they are entirely unprotected against the chronic influence of poisons. As printers are liable to suffer from the effects of lead—one of the strongest poisons—he thinks that preventive measures are necessary, but the Bill ought, in his opinion, to be extended to other trades where lead is used, and he specially mentions some of the home industries where the workmen's children inhale dust impregnated with lead. The children of dial-plate painters, for instance, even if born healthy die in a few months with convulsions. In a village of Hesse, where pottery is glazed by home workers, 71 per cent. of the children were sickly, 50 per cent. died within the first five years, and the survivors suffered from hydrocephalus or macrocephaly.

*Deaths of Medical Men.*

Dr. Henle, one of the best German anatomists and Professor of Anatomy at the University of Tübingen, in Würtemberg, died in that town on May 23rd. He began his medical career abroad as an assistant to the great physiologist Donders of Utrecht, in Holland. He was then appointed professor at the Universities of Marburg, Rostock, Prague, and Tübingen respectively. The number of his anatomical publications is very great, his most renowned work being the "Handbook of Topographical Anatomy." His death will be lamented not only by the members of the profession but also by lovers of the fine arts, because he employed his anatomical knowledge in the interpretation of the problems which present themselves to artists. He published an essay on the Laocoon group, another on the works of Michael Angelo compared with those of the ancient masters, and a series of articles which were collected under the title of "Papers on the Plastic, Mimetic, and Dramatic Art."—Dr. Agathon Wernicke, chief medical officer to the Berlin police, died in Berlin on May 26th. He was one of the organisers of the University of Tokio, in Japan, having been summoned there together with another German medical man in 1874. He principally occupied himself with epidemiology and medical geography, and lectured on these subjects at the University of Berlin. He died from diabetic gangrene, and it caused much surprise that he allowed himself to be attended by a quack and declined to submit to an amputation which was recommended by an able surgeon.

*The Apothecaries' Board.*

A new board in connexion with the Government Medical Department is now instituted by a royal order. It has to deal with all matters concerning the pharmaceutical profession and is to be consulted if any alterations or reforms are intended. It may also advise the Government to alter the laws and regulations when circumstances require it. The board consists of the Director of the Medical Department as chairman, three medical members of this department, four qualified apothecaries (who must be owners of pharmacies), and four other qualified apothecaries employed in licensed pharmacies. The board is to meet at least once a year.

## ROME.

(FROM OUR OWN CORRESPONDENT.)

*Infectious Disease in Schools.*

AT Turin the other day Dr. Angelo Mosso, Professor of the Institutes of Medicine in the University, delivered before the Società Piemontese d'Igiene a lecture on the above topic. No man can be so "wholesomely practical" as the laboratory worker on due occasions, and Professor Mosso showed at once the grave importance of school hygiene by demonstrating that in the dust swept up from between the benches occupied so many hours each day by the scholars any quantity of pathogenic bacilli may be found—among them specimens of the bacillus diphtheriticus. In fact, it was at the instance of Professor Mosso's colleague, Professor Bizzozero, that the former physiologist prepared the lecture he has just delivered. "Every commune," so runs Article 110 of the legislative enactment for the observance of public hygiene, "must have its schools visited at least twice a month during scholastic hours, and without previous intimation by the communal sanitary officer or by medical practitioners specially told off for the purpose." This precaution, however, Professor Mosso proved by official documents to be quite irregularly enforced in even the best organised communes, like Turin itself, where there are over sixty schools, urban and suburban, to say nothing of private ones, and where the sanitary inspection prescribed by Government has to be carried out by only two medical men. Appealing to the precedent of Great Britain, particularly London, Professor Mosso insisted on the adoption in Italy of a similar thorough organisation if her large towns are to have so comparatively clean a bill of health as London, and especially London schools. Even where the "Commissione di Vigilanza," established by the Government quite recently for the protection of elementary schools, is fully organised, it is so far defective that the sanitary officer is without due authority and is without the means of effecting the reforms of which he sees the necessity. This is a grave omission, for, according to Professor Mosso, Italian municipalities "sono restii ai progressi dell 'igiene" (resist hygienic progress), and the want of power to coerce them explains the paralysis of the medical arm and the disastrous prevalence of infectious disease in young Italy. Meanwhile, urged the lecturer, in the present state of the kingdom (financially and politically incapacitated for the graver social reforms) the various Società d'Igiene throughout its borders must educate the public mind, show the dangers incurred by tender youth *in statu pupillari*, and prepare for such a methodical and medically inspired regulation of school hygiene as the Government may give effect to at the first favourable opportunity. Turning to sanitary details in scholastic life Professor Mosso proved that something more than ventilation (deficient as that usually is) requires attention. The *personale subalterno* (the subordinates charged with cleaning the school) must be taught hygienic principles and made to observe them. In the first place the benches should be only so long as to admit of their easy displacement for cleansing purposes under and below them. The old sweeping methods (with brooms), which simply stir up the dust and diffuse it in the air only to settle down again, must be abandoned. Three or four times a week (better every day) the floor should be laid with damp sawdust, afterwards diligently swept up, while twice a month the walls should be carefully washed. For such service the *personale subalterno* should be doubled or trebled. Again, the Società d'Igiene should initiate popular courses of hygienic instruction for schoolmasters and schoolmistresses, especially as to the origin, nature, and diffusion of infective disease, and should publish short, practical treatises addressed to the community so as to ensure intelligent coöperation between school managers and municipal authorities, between teacher and parent. Such a twofold propaganda can be fraught with

nothing but good for "the Italy that is to be." Professor Mosso's recommendations were unanimously adopted by the society, which at its next sitting will discuss the same physiologist's report on "Physical Education in Schools," a subject on which the writer of "The Pathology of Fatigue" expatiates with peculiar authority.

*The Premier on the "Direzione di Sanità."*

In his great speech on the administrative programme of the Government the Prime Minister, the Marchese di Rudinì, has just made an important statement as to the "Direzione di Sanità" (public health department). That department laboured under two constitutional defects which fructified in much irregularity and inefficiency. It had a "scuola d'igiene" (a training college of hygiene) all to itself, and it had "autonomy." The former arrangement, as shown by such eminent physicians and surgeons as Baccelli, Tommasi-Crudeli, and Durante, was vitiated by its detachment from the University. A few years' trial has proved that solidarity with the academic system ensured a more thorough, more enlightened schooling in sanitation and the cognate sciences on which it depends than could be obtained by a separate teaching staff on which these sciences were imperfectly represented or not represented at all. Accordingly, the "scuola d'igiene" has ceased to exist and returns to the University, with all its special laboratories, however, retained. It will, as before, be under the direct cognisance of the Ministry of Public Instruction, like every other branch of medical training and practice. The "autonomy," which made the technical department of the "scuola" a spending department, was also found to work badly. Experts in hygiene, as Baccelli showed, are invaluable as counsellors and assessors, but when it comes to practical administration another set of conditions intervenes for which the laboratory is not the best discipline. They have their place—their indispensable place—in the "Consiglio Superiore di Sanità," but according to the Prime Minister they will no longer have the power of unchecked initiative. Henceforth they will work in concert and, it is believed, in harmony with the heads appointed by the State. These announcements were received by the Chamber of Deputies with loud and well-nigh unanimous expressions of approval.

May 30th.

## EGYPT.

(FROM OUR OWN CORRESPONDENT.)

*Cholera in Alexandria.*

DURING the past three weeks cholera has been manifesting itself in a much more businesslike way than at any time since its first appearance last October. The new cases at the beginning of May could be counted daily upon the fingers of one hand, but they gradually increased until they reached 40 on May 12th. Since then the daily returns have only once been higher than 30, but the total number of new cases during the three weeks is 521. The chief centre of the disease seems to have been some outlying hamlets, whence were brought salad and vegetables for town consumption. Directly the disease was stamped out energetically in these hamlets by English inspectors the number of cholera cases in Alexandria began to diminish.

*Cholera in Cairo.*

With the exception of some half a dozen cases reported during the winter Cairo remained free from cholera until May 9th, when for each of five days there were one or two cases. The disease attacked Old Cairo, the southern port of the city, but it is not certain whether it can have arrived from Alexandria by river or by train. In either case the germs had time to enter the drinking-water of Old Cairo from two men who died on boats there, and this is sufficient cause for the very local distribution of the epidemic so far. Upon May 12th the sanitary department determined to divide the city into districts and to place English medical men temporarily in charge to superintend native medical men and to carry out all necessary prevention work. Old Cairo was allotted to Dr. Keatinge, Saida Zenab to Mr. Milton, the citadel to Dr. Wilson, Ezbekieh to Dr. Engel, Boulak to Dr. Sandwith, while an extra inspector was also appointed to all other districts. Cholera regulations were put into force by the Governor for Cairo on May 16th, and several important measures were also taken for the first time in the history of Cairo. All insanitary bathing-places in mosques were closed, and power was given at discretion to close all dangerous public baths and drinking fountains. In order to preserve as far as possible from contamination the east bank of the Nile above and below the intake of the water company the river has been by the same decree kept clear of all boats and steamers and all washing and other possibilities of pollution. The British soldier is no longer allowed to bathe on that side of the river, and, most important of all, the drainage of the English barracks at Kasr el Nil is no longer allowed to foul the river immediately above the company's intake. It is to be hoped that this last measure will now be permanently adopted, for it has been constantly pressed by sanitary officials, and there can be no legitimate excuse for the negligence of the English military authorities. A special gang of scavengers has been employed to cleanse the river bank, and the whole town is being thoroughly well cleaned up by a special grant of £1500, placed to the credit of Mr. Perry, the head of the scavenging department of the Public Works Ministry. But this sum is only for two months' work, as it is assumed by the financial advisers that when the Nile has risen and cholera has been washed away no urgent need for sanitary matters will exist! It is to be hoped at least that some of the excellent work now being done will be allowed to continue as a permanency. One of the crying needs for Cairo is a real sanitary inspector, who must, of course, be an European. The cholera cases in Cairo since May 9th to May 27th have already numbered 401; nearly all of them so far have been confined to Old Cairo and its neighbourhood. Most of the cases in Boulak have been among workmen employed by day in Old Cairo. The maximum number of cases per day so far has been fifty-three. Dr. Keatinge has a straw hut hospital and a large staff of helpers, including some of the senior students of the medical school, and he has established a simple method of improving the water-supply by running a fire-engine hose out to draw water from a barge far removed from the bank. Yesterday some difficulty arose in consequence of some malcontents objecting to having their possessions disinfected. Unfortunately some women were accidentally sprinkled with acid by a temporary helper and had to be admitted to hospital, but with the exception of this regrettable incident the work has been quite smoothly carried on.

*Cholera in other Places.*

Since May 20th there have been 60 cholera cases at Tourat, near Cairo, among a new battalion of recruits and the police guarding the convict prison and a great village population of negresses. Coles Pasha, Mr. Crookshank, Surgeon-Colonel Gallwey, and Mr. Littlewood are dealing with this. At Ghizeh, opposite Cairo on the west Nile bank, there have been 22 cases, mostly in the prison. The whole number of cholera cases since October has now reached 2256 and the deaths 1878. This gives the high average of 83 per cent. mortality, but if we assume, as it is only fair to do, that for every reported case there are at least two unreported the average of deaths is lowered at once 27·7 per cent. In considering Egyptian vital statistics it must never be forgotten that the diagnosis is nearly always made by inspection of the dead body by an ignorant native doctor or midwife. The death returns of Cairo are extra high just now, because, in addition to the cholera, there is a fatal epidemic of measles among children under three years of age. The health of the British troops is excellent and the sick-rate at Alexandria, Cairo, and Wady Halfa varies now from 4 to 6 per cent. In spite of this a case of cholera has to-day been reported from the barracks at the citadel. The decoration of C.M.G. recently and worthily bestowed upon Rogers Pasha is the first official reward given by England to the Egyptian Sanitary Department since it came under English control in 1884.

Cairo, May 27th.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

*Regulation of Immigration.*

THE immense increase of Italian immigration during the early months of this year is attracting much attention, and the question of refusing entrance to such large numbers of undesirable foreigners is agitating the public. It is estimated that the approximate number of Italians who have arrived in New York between Jan. 1st and April 30th,

1896, is 27,000. It is now proposed to apply an educational test. A test of the educational qualifications of immigrants shows that 67·6 per cent. are illiterate—that is, are unable to read or write their own language. It is held that this class is uniformly degraded, ignorant alike of their own language and of any occupation, incapable of appreciating our institutions and standards of living, and hence very difficult of assimilation. The test would be applied at the place where the ticket was bought and by agents of the steamship companies, thus saving the immigrant the hardship of making the voyage in doubt as to his admission or exclusion. This plan would secure rudimentary education on the part of all foreigners applying for naturalisation papers and American citizenship, and thus promote education among those who desire to emigrate.

*Colour-blindness in Asiatics.*

A surgeon in the United States Navy reports that in Japan among 1200 soldiers 1·58 per cent. were red blind, and 0·833 per cent. green blind. Among 373 boys 1 per cent. were red blind, and among 270 girls 0·4 per cent. Among 596 men in Kyoto 5·45 showed defective colour sense. Dr. Fielde of Swatow, China, examined 1200 Chinese of both sexes, using Thompson's wool tests. Among the 600 men were 19 who were colour-blind, and among 600 women only 1. The percentage of colour-blindness among Chinamen is then about 3 per cent. and does not vary greatly from that in Europeans. Dr. Fielde, however, found that fully half of those tested mixed up blue and green, and this investigator thinks that many of the race are quite blind to the violet colours.

*Civil Service Examination for Pathologist.*

The New York Civil Service Commission give notice that they will hold an examination for the position of pathologist in the department of public charities. No person shall be admitted as a competitor for appointment who shall not produce to, and leave for a reasonable time with, the Examining Board a diploma or certificate from some reputable institution, showing that he has pursued in such institution, with credit for two years, a course of study adapted to qualify him for the position which he seeks or for which his appointment is desired.

*Privileged Communications.*

The Medical Society of the District of Columbia has presented to Congress a Bill entitled "A Bill relating to the Testimony of Physicians in the Courts of the District," which is intended to extend to the citizens of this district the privilege of confidential communications to physicians. This Bill is contested by the justices of the Supreme Court of the District of Columbia on the ground of injustice to litigants and as being contrary to public policy to concede the rights of privileged communications to physicians. Twenty States, comprising one-third of the population of this country, have statute laws establishing the inviolability of such communications.

*The New York Academy of Medicine.*

The New York Academy of Medicine was organised on Jan. 6th, 1847. By bequests, donations, and subscriptions a property has been purchased and a commodious building has been erected, which, including the library, is now valued at $246,292. During the last twenty years the efforts put forth by the academy to collect and maintain a free medical library for the use of the profession and public at large have been more persistent than ever. This library, which at the present time contains more than 4500 volumes, was obtained by gifts, bequests, and purchases, and during the year 1895 was consulted by 6574 readers. Three library funds, by gifts and bequests, have already been instituted and invested on bond and mortgage, aggregating in amount $219,000, the interest of which can only be used for the increase of the library.

*Inspection of Bakeries.*

It is estimated that there are 2000 bakeries in this city, most of which are located in cellars that were never originally intended for such use and are not only badly ventilated but are the favourite haunts of cockroaches, mice, spiders, and even rats. Coal-dust and other matter float around the places, making them unhealthy as workshops and rendering it altogether impossible that wholesome bread can be produced under such circumstances. Bakeries are often the sleeping place of employés and are not more than six feet from floor to ceiling. As an evidence of the danger of such places some samples of bread from these bakeries have been found to contain thirteen varieties of living micro-organisms. In case of contagious disease among the occupants of these cellars there is no reason why the elements of contagion should not be distributed broadcast through the city in the bread there baked. These shops are to be placed under State supervision.

*A National Public Health Service.*

At a recent meeting of the American Medical Association the Committee on Public Health reported three methods of establishing a department of public health: (1) to secure legislation depriving the Marine Hospital Service of its public health functions and establishing a new department after the original plan; (2) to accept the Marine Hospital Service as it now exists and attempt nothing further; and (3) to try to improve the Marine Hospital Service, as far, at least, as its public health functions are concerned, and to render it still more effective with more ample powers and a still greater field of activity. The third plan seemed to be the most desirable one, but in carrying it out it was necessary not to interfere with or curtail the powers of the State boards of health. Additional legislation is needed to make the Marine Hospital Service more efficient, and it should be required to act in the several States in coöperation with the State boards of health and not independently of these boards. The association approved of the suggestions and re-appointed the committee with power to secure the proposed legislation.

May 18th.

THE DIFFUSION OF SMALL-POX.—The small-pox data for the four-weekly period ended May 16th show the disease to be still quiescent in London, the notifications in that period having been only 22, and of these 6 were in Kensington—2 of them, however, proving to have been wrongly diagnosed. Thirteen different sanitary areas in the metropolis contributed cases to the total, as against nine districts with 14 notifications in the period of similar duration immediately preceding. In the corresponding period of 1895 the notifications numbered 40 in the whole of London. In the week ended May 23rd of the present year the admissions of small-pox patients to the hospital ships were 5, against 3, 5, and 6 in the three immediately preceding weeks, and last week the admissions were only 3 in number. On Saturday last the patients remaining under treatment numbered 19. Two cases of small-pox have been reported in Birmingham during last week, both having been removed to hospital and every possible precaution taken. Each of the cases has been traced to infection derived from Gloucester. At the latter place in the week ended May 28th the new cases of small-pox coming to light numbered 52, the admissions to hospital 7, discharges 27, and the deaths 19. There was thus a slight increase on the new cases of the previous week. The principal question which has been under discussion at Gloucester lately has been that of the reopening of the schools. These were reopened on Monday of the present week, and the propriety of the order of the town council allowing this procedure has been called in question. The council have required that they may be made aware of all school children who have not been successfully vaccinated, and that such children be excluded from school. The school authorities have demurred to the alleged attempt of the health body to saddle them with the responsibility of ascertaining how far children have been or have not been vaccinated. The council on their part keep the School Board informed of all houses from which children should be debarred from attending school by reason of small-pox occurrences. When the schools were reopened it appears that of 6370 children on the books only 2029 presented themselves, and that only 17 of these were unvaccinated. Some exclusions not called for were recorded, and other children who should have been excluded were reported to be present. There are now only two cases of small-pox at Cheltenham. Leominster is said to have lost some £10,000 on account of three regiments being sent elsewhere which would have been quartered in the town but for the reported presence of small-pox. The report the small-pox had broken out at Tamerton Foliot, near Plymouth, is contradicted, but the disease is stated to have appeared at Pennycross, a village near at hand. At Lancaster 4 cases have occurred, all traced to infection from convalescent cases coming from Gloucester.

# THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE summer session of the General Medical Council opened on Tuesday last, June 2nd.

The chamber in which the Council now hold their meetings has been obtained, as the President pointed out, in spite of peculiarly exceptional difficulties, and is now their freehold property. The new chamber has been built over the former room, which was much below the level of the street, but occupies the same space as the old one—viz., about thirty square feet. Light, ventilation, and the heating arrangements seem to be excellent. That the sanitary arrangements are satisfactory should be guaranteed by the fact that they have been carried out under the direction of Mr. Teale and Dr. Thorne Thorne. But although the arrangements were greatly approved the new room was used for the first time under very trying circumstances. The roof is of glass, and the fierce heat of the exceptional sun on Tuesday had free course through it, to the inconvenience of the members of the Council and still more of the visitors in the gallery. Doubtless the ingenuity of the executive committee will devise some means of obviating the inconveniences of this roof at the summer meeting.

No less than three new members were received by Sir Dyce Duckworth, who filled the chair pending the appointment of a President—viz., Sir William Roberts, in place of Dr. Wilks, as representative of the University of London; Mr. W. Thomson of Dublin, in place of Dr. Kidd, as direct representative for Ireland; and Mr. Tichborne, who has been elected to represent the Apothecaries' Hall of Ireland in place of Dr. Moore.

Nothing could be more effective or appropriate than the speech in which Sir William Turner proposed the reappointment of Sir Richard Quain, who, as we anticipated, was selected President of the Council until the expiration of the time for which he was elected Crown representative.

It is the custom of the Council to adjourn at four o'clock on the first day of the meeting in order that the committees may get on with their work, and this was observed on Tuesday. The afternoon was occupied by a carefully written and read speech by Mr. Teale, on the increasing multiplicity of examinations and the increasing proportion of rejections. We publish this speech in full elsewhere and a leading article upon it (pages 1547 and 1573), both of which will, we hope, be read by all who are interested in the subject.

Mr. Teale showed that the examinations had wonderfully increased in number, and he quoted unanswerable evidence to show that there was a serious element of chance in the best of them often telling disastrously on the best men, whose failure was due to brain exhaustion and not to want of knowledge. The constant preparation for examinations interfered with the leisure for work—especially for hospital work, which was now postponed till the later years of the curriculum when many examinations had to be passed—as at the conjoint examination for England the ten minutes' bell and the element of hurry came in to agitate the student. He quoted the testimony of practitioners and on his own experience testified to the fact that some of the best university students were sent out with very little practical knowledge. He pointed out that the fifth year was meant by the Council to be available for pure clinical work either in hospitals or with a general practitioner. But it was largely spoiled for this purpose by the dread of unpractical examinations.

Mr. Teale's motion was seconded by Dr. Pettigrew, and then a series of more or less pertinent criticisms began. Sir William Turner, in his most practical and matter of fact style, objected to the speech as somewhat of an academic performance. This was a curious objection from the representative of an ancient university, where everything is prized according as it is academic. He was a little more forcible when he objected that Mr. Teale's motion was merely declaratory and deficient in point. This defect was soon supplied in the proposal to refer the speech and its material to the Examination Committee to report on at the next session of Council. Our own opinion on the subject will be found in another column.

The whole of Wednesday afternoon was taken up with a debate on the proposal by the representative of the Apothecaries' Hall of Ireland to give examiners in medicine as well as in surgery to the Hall. This appeal to the Council, it will be remembered, is in accordance with the suggestion of the Lords of the Privy Council in their recent hearing of the case of the Hall as affected by the refusal of the Medical Council to appoint surgical examiners in accordance with the provisions of the Medical Act of 1886. The question was one of absolute novelty and of considerable difficulty. There was a sharp division of opinion on the subject among the members of the Council, which was strikingly shown in the discussion. Even Irish opinion was much divided. Sir John Banks seconded the motion of Mr. Tichborne, the representative of the Hall, and it was supported by Sir Philip Smyly, who represents the Royal College of Surgeons. But Mr. Thomson made an excellent maiden speech against the proposal, showing that if the direct representative principle in Ireland does show a wonderful *penchant* for Dublin consultants it has in this case added a member to the Council who will contribute to the value and the dignity of its discussions, and we may assume that Dr. Atthill, who observed an eloquent silence, did not differ much from Mr. Thomson. The opposition to the proposal to accede to the suggestion of the Privy Council found its main exponents in Mr. Bryant, Mr. Wheelhouse, and Sir Dyce Duckworth. On the other side the principal speeches were by Sir Walter Foster, Dr. McVail, and Dr. Heron Watson. The importance of the discussion was in the fact that it involved the attitude of the Council towards the Privy Council in an entirely new situation and one requiring great and mutual respect. The tendency to end a qualifying body whose candidates have dwindled to half a score in the year under adverse criticism is very strong. But it needs to be kept in some check for various reasons. The ending of a medical corporation is a judicial act and has to be performed not by the General Medical Council but by the Privy Council, and it is highly important that in the part which the Council plays in the preliminary process it should act slowly and with something of judicial deliberation. Besides, for good or evil, the Privy Council and the General Medical Council on rare occasions have to coöperate under the Medical Acts. It is highly desirable that they should facilitate each other's work and respect each other's point of view. Opinion seemed very finely divided, but the time for the rising of the Council came. The standing order was suspended to allow Sir William Turner to propose a third course—viz., to postpone an immediate answer to the Privy Council, pending a representation to the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Ireland, that they should make an effort to reconstruct another conjoint board on a new basis satisfactory

to the Council. This proposal seemed to commend itself as the best way out of a difficult situation, and Mr. Tichborne withdrew his motion in its favour. But it came as such a surprise to the ardent opponents of the motion for appointing examiners that the discussion had to be adjourned. And so the body concerned remains, and is likely to remain some time longer, in a state of suspended animation.

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TUESDAY, JUNE 2ND.

THE session of the General Council of Medical Education and Registration opened to-day in the new hall of the Council in Oxford-street, London. Mr. Wheelhouse, as chairman of the business committee, intimated that the Council were without a President, Sir Richard Quain's term of office having expired on May 26th, and proposed that in the meantime Sir Dyce Duckworth, senior treasurer and senior officer of the Council, should take the chair and preside over the meeting. This proposal was at once adopted, and Sir Dyce Duckworth took the chair. Mr. Wheelhouse introduced Sir William Roberts as the successor of Dr. Wilks in the representation of the University of London; Sir John Banks introduced Mr. William Thomson as the new direct representative for Ireland in room of the late Dr. Kidd; and Sir John Banks also introduced Mr. Charles R. C. Tichborne, the successor of Dr. Charles F. Moore in the representation of the Apothecaries' Hall of Ireland.

*Re-election of Sir Richard Quain as President.*

Sir WILLIAM TURNER moved:—

"That Sir Richard Quain, Bart., be re-elected President of the Medical Council till the expiration of the term for which he has been nominated a member of the Council by the Crown."

In putting this motion before the Council he desired, he said, to recall what took place on May 26th, 1891, when Mr. Carter proposed, and he (Sir William Turner) seconded, the election of Sir Richard Quain to the Presidential chair. The services of Sir Richard Quain to the Council dated from 1863, and he was at the time, as he is now, the senior member of the Council. He had taken an active part in its affairs from the time he was first chosen, not only in its general business, but also in certain special duties which had been imposed upon him. The Council had had experience of him as their extremely active and economical treasurer and they had known him as Chairman of the Pharmacopœia Committee. But there were other reasons which weighed at any rate with some of them. They knew Sir Richard Quain as a man abounding in amiability, as one of the most delightful and pleasant of their colleagues, and as a man with an infinite capacity for taking trouble. The Council chose him upon that occasion. Since then they had had five years' experience of him as President, and no one could say that he had shown any want of diligence or ability in the conduct of their affairs. They had to bear in mind that the President's duty was by no means confined to the meetings of the Council. In fact, he was inclined to say that the President's duty and responsibility were in all probability much greater in the intervals between sessions than in the sessions themselves. In explanation of the terms of the motion he had moved he might say that Section 9 of the Medical Act of 1886 laid it down that the Council should elect a president for a term not exceeding five years and not extending beyond the expiration of the term for which the member concerned had been appointed to the Council. He might just add that he knew Sir Richard Quain was extremely anxious to see issued the new edition of the Pharmacopœia. His whole heart had been in the work for so many years, and he knew it would be a matter of great pride and gratification to him if he were in the presidential chair when the new edition was produced.

Mr. WHEELHOUSE seconded the motion.

Sir JOHN BANKS said that Sir Richard Quain was one of his oldest and dearest friends in the world, and he endorsed everything that had been said in his praise.

Mr. BRUDENELL CARTER and Sir PHILIP SMYLY having spoken briefly in support of the motion it was carried by the Council by acclamation.

Sir Richard Quain, who had temporarily retired, was formally introduced to the Council by the mover and seconder, and received a cordial welcome from Sir Dyce Duckworth and the rest of his colleagues when he took the chair.

The PRESIDENT, having thanked the Council for re-electing him, proceeded with the customary inaugural address.

*The President's Address.*

Sir RICHARD QUAIN, in his opening remarks, expressed his gratification for the honour which the Council had unanimously conferred on him in placing him in his present position on their assembling to-day for the sixtieth session of the Council. He passed in review the great names that had and still continue to be members of the Council and, continuing, said:—

"It is quite true that some things may have been left undone that ought to have been done, and that some things have been done that might have been left undone, or done in a better form; but it must be remembered that the Medical Council is a modern creation, that the laws under which it exists aimed at bringing together a number of elements which had previously had a separate and independent existence, that each of these several elements followed its own traditional method, which it believed to be the best, and that consequently it has taken much time to amalgamate these bodies and to secure that unity which has been most desirable and towards which much progress has been made. In the early days of the Council we had to witness what was described by Sir Dominic Corrigan as 'the battle of the shops'; but few traces of such battles now exist, and I earnestly hope that we have seen the last of them. Difficulties, too, have arisen with regard to the statutes under which we act. There are many members of the profession who think that we should have much larger power than we possess. On the other hand, there are those who think that our powers are all-sufficient and who would resist their extension. My impression is that by patience and perseverance—'moral suasion'—and a steady exercise of the powers which the Council possesses we shall be able to accomplish all that we need or that public opinion would sanction."

[He then referred to the progress and improvement since the early days of the Council in all its proceedings: the advance of medical education and the higher reputation with the public of medical students and medical practitioners. Referring to the incidents of his stewardship since the last meeting of the Council he said:—]

"It may be mentioned that there have been eleven cases of unprofessional conduct inquired into, of which three, together with one that could not be dealt with during the last session of the Council as the matter was being held in a court of law, will be submitted for your consideration. There is also a report of the Dental Committee on the first case of 'covering' by a dental practitioner. Some of these cases are of a very special character and will involve the grave and patient consideration of the Council. Since the last sitting a practitioner at Leeds, whose name was removed from the Register on November 25th, 1887, has been prosecuted and fined for continuing to style himself 'Dr.,' the fine being paid to the Council. A person, without any qualification, styled himself 'Dr. Bell,' practising in London, has been prosecuted for using the titles 'M.D.' and 'Dr. of Medicine,' and fined, the penalties in this instance going to the Receiver of the Metropolitan Police. A penalty, at first retained by the Staffordshire Potteries Stipendiary, has been paid over to the Council as the result of the action of our solicitor. In two other cases conducted by a society, penalties have been recovered, and in one instance remitted to the treasurers of the Council. There have been numerous applications for registration by dentists who failed to register when the Register was open which have been inquired into and reported on by the solicitor. The executive committee will submit a report on the disciplinary functions and penal powers of the licensing bodies, in accordance with the resolution passed by the Council at its last session. The Council will desire to be informed as to our proceedings with reference to the Pharmacopœia. On this subject I can inform the Council that whilst progress has been continuous it necessarily has been slow, in consequence of the great care that is being bestowed upon the work. The pharmacopœia committee, since its appointment, has held several meetings—namely, three in July, 1895, two in November, and two in April, 1896. The subjects which have been brought under consideration have been those relating to the general construction, the omissions and the additions, the weights and measures, nomenclature, dosage, and the classification of the monographs into sections (ten) for revision purposes. Four such sections are in type, two of them having been revised, and two wait revision. This

section contains many hundreds of monographs and comprises a large proportion of the work. The committee has already had occasion to invite the assistance of the pharmacological referees, Dr. Lauder Brunton, Dr. Ralph Stockman, and Dr. Walter Smith, and has received valuable information in answer to questions from the committee. The work is not yet sufficiently advanced for the committee to take advantage of the courtesy of the chemical and botanical referees, but as soon as the materials are ready the committee will gladly avail themselves of the services of Professor Thorpe, Professor Tilden, Professor Emerson Reynolds, Dr. Thiselton Dyer, and Mr. Holmes. The Pharmaceutical Society's Pharmacopœia Committee has been engaged more or less continuously in replying to the many questions of the Pharmacopœia Committee of the Council, and has already sent in three reports. The committee has decided to introduce the metric system of weights and measures side by side with the imperial throughout the general text and to employ the metric system alone in the paragraphs relating to analysis. Under present circumstances to forecast the period at which the new Pharmacopœia will be issued is impossible. In the meantime it has been found necessary to order 500 additional copies of the present issue.

"The Council has already been kept fully informed of the steps which have followed the communication to the Privy Council of the Council's refusal to appoint Assistant Examiners in Medicine to the Apothecaries' Hall, Dublin.

"Our legal advisers will report to the Council as to the action which has been taken by the Privy Council in the matter, and an application, which has already been presented by the Apothecaries' Hall in accordance with the suggestion of the Lords of the Council, will come on for early consideration.

"With regard to the important business which now lies before the Council, I may say that, having been just appointed to my present office, I cannot do more than refer to the various valuable reports which have been prepared by the various committees, and which will in due course be submitted to the Council.

"From the Examination Committee we may expect a codification of the Council's recommendations in regard to professional examination, prepared as a result of the recent visitation and inspection of these examinations; from the Education Committee a like report in regard to professional education, another on preliminary education, and possibly reports on minor matters; from the Public Health Committee the report on the Examination for the Diploma of Public Health of the University of Oxford, the last of the cycle of inspections, and a revised table of recommendations; from the Dental Education and Examination Committee a report on an alleged case of laxity in admitting an American dental graduate *sine curriculo* by one of the licensing bodies, remitted to that Committee for report at the last meeting of the Council, and a report by the committee, specially constituted for the purpose, on the so-called midwifery diplomas.

"The last of the dental licensing examinations has just been visited, but as the remarks of the bodies have not yet all been received—indeed there has not been sufficient time—the reports thereon by the Dental Education and Examination Committee will be presented in November."

Referring to the changes in the *personnel* of the Council, Sir RICHARD QUAIN said they missed from amongst them Dr. Kidd, who was always ready to help the Council with words of wisdom emphatically expressed, more especially with reference to educational matters, in which he took very great interest. His place in the Council would be occupied by Mr. William Thomson, who brought to them a very high reputation and special fitness for the duties which he would be called on to perform. They had also been deprived of a most valued member in Dr. Wilks by reason of his elevation to the Presidency of the Royal College of Physicians of London. His place had been filled by the appointment of Sir William Roberts, F.R.S., whose high and special attainments, great ability, sound judgment, and experience could not fail to bring valuable aid to the deliberations of the Council. At the last moment a further vacancy had been created by the resignation of Dr. Charles Moore in consequence of severe domestic sorrow. Dr. Moore's place had been filled by the appointment of Mr. Charles R. C. Tichborne, an eminent chemist and sanitarian, the Governor of the Hall. In conclusion he again thanked them for the distinguished honour which they had conferred upon him, for he regarded the holder of the office of President of the Council, chosen as he is by the representatives of all the educational and licensing authorities, by the representatives of the Crown, and by the direct representatives, as the representative of the medical profession in Great Britain and Ireland.

On the motion of Mr. WHEELHOUSE, seconded by Mr. BRYANT, the President was thanked for his address.

*Business Committee.*

This committee was constituted as follows—viz., Mr. Wheelhouse (chairman), Sir William Turner, Mr. Bryant, and Dr. William Moore.

*Examination Results.*

Mr. MILLER, clerk to the Council, presented a series of tables showing the results of professional, preliminary, and other examinations during 1895.

*Medical Education and Examination.*

Mr. TEALE moved:—

"That the present system of accumulated examinations and the enormous increase in the number of rejections resulting from it are not only unjust to the student, but damaging to medical education; therefore:—That the time has arrived when the General Medical Council should consider:—(*a*) How far examinations and occasions of rejection can be reduced in number; (*b*) how far, whilst maintaining effective examinations in those subjects which it is essential that every medical man should 'know' and 'retain the knowledge of,' it is possible to withdraw from the sphere of public examination several other subjects which it is desirable that every medical man should 'know about,' but with the details of which he need not permanently burden his mind, the 'bird's-eye survey' of such subjects being ensured by compulsory short courses of lectures, with class examination certified by the teacher."

[*We have printed Mr. Teale's eloquent and forcible speech at full length in another place* (p. 1547).]

Dr. PETTIGREW had much pleasure in seconding the motion. The importance of the subject could scarcely be exaggerated. It really raised the whole question of their medical education and examination. He thought the present system had broken down. From the number of rejections one of two things was evident—either that the education of the present day was imperfect or the mode of examination was too high or not adapted to the requirements. He thought the fault was in the system of examination and that they had proof thereof in the enormous number of rejections. He remembered his late master, some twenty years ago, saying to him that there was too much examination and too little education, and really, after all, it was education, and not examination, that made or marred a man. What mattered it to a man how often he had been examined. He was not made a better man thereby. Education should, therefore, be the beginning, middle, and ending in this country. It was the duty of this Medical Council to see that the medical education of the country was conducted on proper lines. It appeared to him that for many years they had been putting the cart before the horse in exalting the examinations and depressing the education. The result of this had been fatal in many ways. Time was when they had originality and power in the imparters of medical education. Now medical education was in the hands of teachers little better than coaches. It was the examination that was leading, not the education; this was bad. Examinations nowadays conduced to a system of cram that was to be deplored. Everyone knew that a smart student might get up sufficiently well in many subjects to pass examinations, but they knew also that he did not know any of them well. He was like a sponge: he took in and gave out, but there was nothing of a permanent character or of individuality about his acquirements. What they had to do was to get the student to understand the subjects he was taught. The present system destroyed the reasoning powers of the student, and when they had finished with him he was a poor creature. Generally he was not a man of thought or resource or a leader of men. They must get their students to think and reflect in order to make them capable. He therefore thought the time had come when the Council should turn over a new leaf. It might suit the convenience of those who were wedded to specialities to advocate the present system, but what he said was this, it was a wrong system and most unfair to the student, who had to pay the penalty as regards time, energy, and money. As to the time allowed for the medical studies of the present day it was notorious that the five years required by the Council were becoming inadequate. He agreed with every word that Mr. Teale had uttered, and he hoped the Council would make his proposal a rallying point, and from

this day forth they would make a new departure that would be more fair to the student. He also hoped that the Council would give the subject the most careful consideration and deal with it in the most deliberate manner.

Sir WILLIAM TURNER said that the Council had been favoured with two academic essays—one read and the other spoken. Mr. Teale's reading what he had to say in support of his motion was introducing into the procedure of this Council something quite new. The Council had been accustomed to make speeches—good, bad, or indifferent—but they had not been accustomed to submit essays, and he thought that it was a mistake to make the innovation. But this motion proposed by Mr. Teale was itself a purely academical one. There was not one single practical suggestion in it. Mr. Teale had not even suggested a committee to consider it. He (Sir William Turner) was not in the least degree wishing to throw doubt on the importance of many of the matters that had been brought before them, but owing to the method in which they had been brought forward the Council obtained no practical standpoint for their consideration. The Council as a Council was incompetent to enter into such a discussion as they had been invited to. They had committees, their education and examination committees, and he submitted that the points raised were points which should be submitted to these committees. In conclusion, he submitted that the motion, being purely academical and not practical, there was no use in discussing it.

Dr. LEECH, after a pause, rose and declared that, although he agreed with much that Mr. Teale had said, he could not support the motion. As to the relegation of examinations to the various colleges he could not see that it would be of any service. He should not like to see it carried out because he thought that it would not strengthen education, but would do it harm.

Mr. BRUDENELL CARTER was of opinion that many of the evils complained of would rather tend to remedy themselves in course of time. The great extension of medical teaching and examination in recent years had, he thought, tended to the employment of a larger number of teachers and examiners than were really qualified for what they had to do. The deficiency in the examiners was nowhere more noticeable than in the written questions which were put before candidates. When they got questions written in clear good English they should get candidates who would answer them better. As he could not help thinking they were at the present time in a transition stage he should deprecate any relaxation of the standards that it was the Council's duty to enforce.

Dr. GLOVER said he should be very sorry if the Council came to the conclusion that Mr. Teale had spent an hour too much in the preparation of his statement or a minute too long in its delivery. No man had taken more interest in this subject than Mr. Teale had done, and he should be sorry indeed if the Council dismissed the motion without further consideration. He should suggest that it should be referred to the Examination Committee for consideration and report. It was the Council's business to make education so nearly perfect that the examiners should have less to do, while the proportion of rejections should be far less than it was at the present time. It might not now be a disgrace to be rejected, but rejection all the same was a disaster to a man. Dr. Leech had pointed out that the Preliminary Examination in Arts had not advanced or developed *pari passu* with medical subjects, and he (Dr. Glover) believed that if the Council could make the entrance examinations such as would test men sufficiently they would do the profession and the public much benefit.

Dr. MCVAIL thought that the climax of Mr. Teale's speech came at the end, but in face of the reflection about what medical men of other days would say of medical education in these days it might be an equally fitting subject of speculation to wonder what Stephenson would say if he could look upon the modern locomotive. For his part he was altogether on the side of the moderns in the matter of medical education and examinations. This Council was a council of medical education, but how could it educate except by examining? In his opinion it could only be a council of education by examination. Progress had been made in medical science and education since 1861, and were the public not to get the benefit of it? It was absurd to suppose that the present day requirements could be as easily met as were the requirements of 1861, and they should continue to lay it down that a man must be rejected until he knew the prescribed subject. It was always certainly a serious matter for a student to be rejected, but he thought they had proof in the reports of their inspectors and visitors that the questions at examination were not only fair and suitable, but creditable to those who were responsible for them. It was interesting to hear Mr. Teale. He was to-day a voice from the past, but if this Council gave such an expression of opinion as Mr. Teale hinted at and Dr. Glover demanded they would be doing nothing less than saying that they were to go back in civilisation for half a century.

Mr. WHEELHOUSE wished to call attention to one point which had been made by both inspector and visitor, and that was that so far as this matter of examination was concerned if the Council could devise a means of subdivision of subjects by which a decrease of examinations could be secured, a great deal would be effected. As a visitor himself, he for one had to regret that the examinations had been divided and subdivided until a man lost himself in the multiplicity and did not know whether he was really through when he came to what he thought was the end of the examinations.

Dr. BRUCE regarded the subject of examinations as a very practical one, and on this occasion it had been introduced to the Council by a man than whom there was none in the Council more practical. The Council should see to it that they had a system which would secure the passing of the men best fitted for the profession.

The PRESIDENT thought there was no time remaining for further discussion. There was no doubt that the motion was a declaratory one, and the Council should decide what they should do with it.

Sir WM. TURNER thought that in view of the large amount of business the Council had to dispose of this session, it would be better to proceed to a vote.

Dr. MACALISTER, who was not at all satisfied that there was justification for the presence in the motion of such terms as "enormous increase," "unjust to the student," "damaging to medical education," moved as an amendment, "That the Council, without committing itself in any way to the views expressed in the motion, refer it to the Examination Committee for consideration and report."

Dr. BATTY TUKE formally seconded the amendment.

Mr. TEALE asked if Dr. Pettigrew would accept the amendment.

Dr. PETTIGREW thought it would not be quite fair to dispose of the matter in the rapid manner contemplated. He thought they should adjourn the discussion.

Mr. TEALE, who was willing the matter should go to a vote, briefly replied. He said he felt that he was raising a very, very serious matter, and he had not taken action without much consideration. As to the motion being an academical one, of necessity it must be academical, because it was raising questions that had grown up and were growing. He was not the voice of the past, but rather the voice of the future, for they would find that these questions would continue to grow.

The amendment, having been accepted by the mover and seconder of the motion, was agreed to, and on being put to the Council as a substantive motion was carried.

The Council adjourned.

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WEDNESDAY, JUNE 3RD.

The Council met again to-day, with Sir RICHARD QUAIN in the chair.

*The Apothecaries' Hall of Ireland.*

The entire sitting was devoted to a consideration of the affairs of the Apothecaries' Hall of Ireland and an application by that body for the appointment of examiners in medicine and surgery. The subject was introduced by Mr. MILLER, Clerk to the Council, reading a report of the proceedings in the recent appeal to the Privy Council prepared by Mr. Farrer, the Council's solicitor, and the following application from the Apothecaries' Hall—viz.:—

"Apothecaries' Hall of Ireland,
" 40, Mary-street, Dublin,
" May 25th, 1896.

"SIR,—As you are doubtless aware, the question of appointing Assistant Examiners in Surgery for the Examinations of the Apothecaries' Hall of Ireland came before the Privy Council on Monday, 11th inst.

"Towards the close of the argument their Lordships made a suggestion that the Hall should again approach the General Council with a view to the appointment of Examiners not only in Surgery but in Medicine, and should so place themselves in the hands of the General Council to such an extent as would enable that body to be satisfied that

the examinations would be for the future a complete and sufficient test for the purposes of the Act of 1886.

"Their Lordships further intimated that in their opinion the proper course would be for the Hall to submit names of proposed Examiners in Medicine for the General Council to approve, and directed the case to stand over to see whether this would be done. The Hall are now prepared to act on this suggestion. They venture respectfully to assure the General Council that their desire is by every means in their power to raise to and maintain at a high level the sufficiency of their Examinations, and they will cooperate with the General Council in taking any steps which are requisite towards that end.

"So far as Medicine is concerned they suggest for consideration the following gentlemen:—

"James Byrne Coleman, M.B., Master in Surgery, Examiner in Medicine, Royal University, Ireland, Physician to Jervis-street Hospital.

"E. R. Townsend, M.B., T.C.D., Professor of Medicine to Queen's College, Cork, Physician to Cork Infirmary.

"*Or*,

"H. Auchinleck, M.D., F.C.S.I., Physician to Mercer's Hospital, Dublin.

"If the Medical Council should prefer to substitute any Examiners in Medicine for those above named, the Apothecaries' Hall of Ireland will be pleased to defer to the wishes of the Council in that respect.

"I have further to ask that the Council will be so good as to appoint the following gentlemen as Assistant Examiners in Surgery:—

"Francis T. Heuston, M.D., R.U.I., F.R.C.S.I., and M.C.R.S.I., Surgeon to the Adelaide Hospital.

"F. Conway Dwyer, M.B., Bac. Surg., T.C.D., Surgeon to Jervis-street Hospital.

"I have not given the names of the examiners whom the Hall will appoint in other subjects, as I do not understand that this is required. Our representative at the Medical Council is, however, furnished with a list of our examiners, and will, if necessary, be prepared to submit them for approval in the same way that I now submit the names of the Examiners in Medicine and Surgery.

"The Apothecaries' Hall of Ireland believe that if the Medical Council will appoint Assistant Examiners in Surgery and Medicine, such examiners will, with the examiners to be appointed by the Hall, constitute an Examining Board who will maintain a standard of efficiency satisfactory to the Medical Council.

"The Apothecaries' Hall have refrained from submitting the names of examiners in other subjects, as they feel that the Medical Council would prefer to be relieved of the responsibility of themselves appointing examiners in any subject in which the Hall are competent to examine without the assistance of the Medical Council. At the same time, if there are any suggestions which the Medical Council think right to make with reference to the examiners to be appointed by the Hall or the examination generally, the Apothecaries' Hall of Ireland will be prepared to adopt them, and have given instructions to their representative on the Council to that effect.

"I am, Sir, your most obedient servant,

"CH. R. C. TICHBORNE, Governor.

"To the President of the General Medical Council."

Mr. TICHBORNE, the new representative of the Apothecaries' Hall, then addressed the Council. He explained that he had drafted the following motion:—

(*a*) "That the application contained in the memorial of May 25th, presented by the Apothecaries' Hall of Ireland to the Medical Council, that the Council should appoint Assistant Examiners in Medicine and Surgery, be agreed to.

(*b*) "That the names of the proposed Examiners in Medicine and Surgery respectively be approved.

(*c*) "Or, if the Council think fit, that any other examiners be appointed in those subjects."

And he proposed now to move the first portion of it. He would not go into the details of the question because they were familiar to the members of the Council. It was stated that the Apothecaries' Hall of Ireland was the oldest examining body in the United Kingdom. He did not say that, but it had been stated by those who had investigated the matter. All he said was that the Hall was a very old corporation and that during the whole period of its existence there was no record of an apothecary having misconducted himself in a professional respect. Besides that they found that they had had connected with them many very eminent men. In fact, the history of chemistry in Ireland was the history of the Apothecaries' Hall. It might be said that that had nothing to do with the question, but that was not his opinion, because they did not find that men held a very distinguished position in their profession, unless their early training had been such as to make them familiar with the subject in which they had particularly excelled. It was an indication that there was sound practical education. He need hardly say that the Hall was very anxious and had done its best to keep up that sound practical education. When the first report appeared containing adverse criticism as to the conducting of the examinations Mr. Chance and himself carefully considered the scheme of the examinations and revised it. They endeavoured to carry out every direction of the Council, and in many cases they went even further than the Council asked them. The scheme was approved by the visitors and inspectors, who in the reports referred to it in the most complimentary manner; therefore, at any rate, their intentions were good. The one weak point, according to the reports, was the examination in medicine, and he thought that logically they had met it. They said: Very well, they were quite ready to be relieved of the responsibility. If the Council would appoint the examiners in medicine they were perfectly agreeable; in fact, they never practically appointed their own men. The men they appointed and who were objected to as regards their examination were appointed, not because they were apothecaries, but because they were clinical physicians holding the highest positions in the hospitals of Dublin. He believed that the function of the Council was to consider the remuneration of the proposed examiners, and they left that entirely in the hands of the Council.

Sir JOHN BANKS in seconding the motion said that he had the most thorough reliance upon the Apothecaries' Hall carrying out what they proposed. He believed that they would raise the standard of education and that they would maintain it. In addition to that he would say that the examiners proposed were all known to him as men of the highest character and he was satisfied that they would do everything in their power to meet all the requirements of the General Medical Council.

Sir PHILIP SMYLY called attention to certain statements made by Sir Robert Reid in the course of the hearing of the appeal before the Privy Council, and complained of their not being justified by the facts. The Royal College of Surgeons in Ireland had never had any voice in the election of examiners in medicine, and they were not therefore responsible in any way for the conduct of the medical part of the examination. These appointments were made solely by the Apothecaries' Hall, who were alone responsible for them. He would ask the Council to remember that by a rule of this body the examiners in medicine of the Apothecaries' Hall must be medical officers of a clinical hospital. That handicapped the Apothecaries' Hall, because they had to take physicians who were hospital physicians. They had no such men in their own body, and they had consequently to go outside. They appointed the best men they could get, and yet after each course of examinations they were remonstrated with because the examination was not sufficient. For this reason, and for this reason alone, the Royal College of Surgeons in Ireland separated from the Apothecaries' Hall. He hoped the Council would consider the matter very carefully, and not wipe out an ancient institution without proper inquiry and investigation.

Mr. BRYANT said he approached this subject with a very great feeling of responsibility. They must all feel that the result of their deliberations would have an important influence not only upon the Apothecaries' Hall as an examining body but upon the power and prestige of the Council. Hitherto the decisions of the Council had received the support of the courts, but here for the moment they had got a little check and they were asked to reconsider an important decision they had arrived at at the last meeting. He asked his colleagues whether anything had been said or done since the meeting which should induce them to alter their decision. When they came to the decision they knew what they were doing. They knew that this examining body had failed on repeated occasions to conduct a satisfactory examination and they knew that the effect of their decision might be to put an end to the Apothecaries' Hall as an examining body. That fact was prominently in their minds at the time. As to the Privy Council, it was evident that they desired to get out of a rather disagreeable and difficult position. He did not think that the Privy Council wished them to be frightened or scared out of their decision. The Council was perfectly free. No pressure had been put upon it; and he hoped that the Council would consider it right to stick to the conclusion at which they had arrived after long discussion and deliberation. If they did not they would seriously jeopardise their own position and would be regarded as incompetent for the discharge of the duties imposed upon them.

Mr. WHEELHOUSE, who was one of the Visitors to the examination of the Hall, said he was surprised to hear Mr. Tichborne speak of the good men who had been connected with the Hall. What atom of educational power did the Hall possess? They had no hospitals, no schools, and no means of teaching surgery, medicine, or midwifery; they had no means of doing anything except examining those persons who had been educated by other people. Therefore if the great men connected with the Hall were of any moment at all it was because they had been thoroughly well educated in other places and not in the Apothecaries' Hall of Ireland. In his visit he had seen the earnest and steady desire to improve the examination on the part of the governing body. He had seen an increasing

improvement in the examinations themselves, but he still believed that until the examinations were put upon a higher level than any which he saw they did not reach the level that was reached by almost all, if not all, the other examining bodies in the country.

Mr. TEALE asked Mr. Muir Mackenzie whether, supposing on the passing of the Medical Act of 1886 the Apothecaries' Hall, unable then to join with any other body, had asked the General Medical Council to complete their position by appointing examiners in surgery, the Council would have had the power to refuse the application.

Mr. MUIR MACKENZIE replied that in a certain sense the Council would have had the power to refuse, but refusal in such cases could not be regarded as *bonâ-fide*. In reply to another question Mr. Muir Mackenzie said that the Privy Council had expressed no opinion on the application but simply adjourned its consideration.

Dr. GLOVER said he was one of the minority on the last occasion. He did not believe there was any serious difference between the Privy Council and the General Medical Council and he hoped members would not be led away by any feeling that they were in collision with the Privy Council. He believed that they were in entire concurrence with the Privy Council, the only anxiety of their lordships was that medical matters of this nature should continue to be settled as they had been for the last quarter of a century—by the Council and by the Council alone. He thought that it was unfortunate that the Examination Committee should have suggested that the Royal College of Surgeons in Ireland should separate from the Apothecaries' Hall; such a suggestion was entirely *ultra vires* and had no sanction from the Council.

Sir DYCE DUCKWORTH asked whether the Council did not accept the report of the Examining Committee containing the suggestion and thereby become responsible for it.

Dr. GLOVER said he should be glad to have this most important matter settled.

At the end of a long informal conversation on the point it was announced by Sir William Turner that while the Council dealt with certain specific recommendations in the report they did not formally approve the report.

Dr. GLOVER said he was glad this had been made clear, for the misapprehension had had considerable effect upon the Privy Council. The proposed examiners, he went on to say, would be virtually the examiners of the Council and would conform to their regulations, and in the circumstances he thought the Council would be justified in giving the Apothecaries' Hall another chance.

Mr. WILLIAM THOMSON, the new direct representative for Ireland, said he had given the matter most careful consideration, and had come to the conclusion that in the interests of the public and the profession the application should not be granted.

Sir DYCE DUCKWORTH said that as chairman of the Examination Committee he was fully acquainted with this Irish case, and the story of the Apothecaries' Hall of Ireland was a very old story, for it was a body whose examinations had been declared inadequate twenty years ago. They were asked in the application before the Council to set upon its legs again a body that was certainly crazy. It had been an argument in favour of it that its licentiates served the poorest of the people in Ireland, but on inquiry he found that the poorest class in the country were well provided with medical advice by gentlemen holding the diploma of the Conjoint Board or the triple qualification of Scotland rather than by licentiates of the Apothecaries' Hall. The special necessity for supporting this body therefore disappeared. They had heard a most admirable speech from Mr. Thomson, and if what he said fairly represented the opinion of the profession in Ireland he should like to know what would be the opinion of the profession throughout the kingdom and whether this committee were to sit and consider and endeavour to infuse a new life into this crazy, crumbling body. It must be remembered that the Apothecaries' Hall of Ireland was a body that during the last four years the General Medical Council had condemned utterly. His belief was that the Hall had lived its day and done its work and that the Council ought not in any way to relieve the Privy Council from doing its duty respecting it. He agreed with Mr. Bryant that nothing had occurred in the last six months to alter the opinion they formed last year. There was no occasion for them to do anything. They were not asked by the Privy Council to do anything. The Hall, however, came and said, "Give us examiners." They were asked to prop up this body, which was not worthy on any grounds whatever. They would not be doing their duty to the profession and the public if, for no reason whatever, they should go back upon their former decision and do the dirty work of the Privy Council. Let them show that they were men, not children, that they had the courage of their opinions, and that they would do their plain duty without fear and without favour.

Sir WALTER FOSTER pointed out that for the first time in its history the General Medical Council was face to face in a difficulty with the Privy Council. The point at which they had arrived was one that might lead them into a position which would be one of humiliation and, possibly, of considerable difficulty with reference to all such questions in the future. For himself, he was grateful to the Privy Council for the course they had adopted. In dealing with the case as they had done they had behaved with great discrimination. The Apothecaries' Hall, it must be remembered, was a body which had been recognised by two Acts of Parliament, and placed side by side with all the other licensing bodies in the United Kingdom. While it might have continued an independent existence it had instead followed the direction of the Act of 1886 in seeking combination with the Royal College of Surgeons. For its very virture in so doing were the General Medical Council to say that they would not do for it what they did in 1886? He thought that would be an ungenerous and unjust position to take. It was one he could not vote for, for it would be the suppression by a side issue of one of the licensing bodies maintained by the Act of 1886. If they refused the application that was now before them the case would go back to the Privy Council, and that Council might appoint the examiners asked for. If they did, that would place the General Medical Council in a very unfortunate position, for the examination of the Apothecaries' Hall would be established as a State examination, with all the advantages that the sanction of Royal authority could give it. Moreover, the General Medical Council would have from time to time to report to Parliament how the State was doing its duty as an examining body. They would have the Apothecaries' Hall competing in Dublin with the other bodies, and that he thought would be very undesirable in the interests of the profession. It was unfortunate that they should not have the three licensing bodies in that city forming a joint board. An opportunity to secure combination existed in present circumstances, and before they went back to the Privy Council the General Medical Council ought to try and bring their friends in Dublin together. Rather than give a vote in direct negative of the application, he hoped the Council would find its way out of the difficulty by the adoption of a course that would lead to the creation of a strong combined examining board in Dublin.

Dr. THORNE THORNE was convinced that there was never any want of sympathy with the Apothecaries' Hall of Ireland. The General Medical Council had been very long-suffering with it. Yet the Hall was in the position of being the only body in the United Kingdom that had been reported for inefficiency. That was a very great stigma on its reputation. The decision to refuse appointment of examiners had been very deliberately arrived at, and since it was come to nothing new had emerged. Even the suggestion to appoint examiners in medicine as well as surgery was old and had been deliberately rejected. His impression of the Privy Council's decision was that they did not want in the slightest degree to interfere with the General Medical Council's decision or discretion in the matter, and he believed that if the Council said that they could not change their minds the Privy Council would be absolutely and fully satisfied with what they said. He believed that the Privy Council left the Council's discretion intact. It had been said during the case that one could not help feeling that the General Medical Council were much better judges in this matter than the Privy Council. There was not a suspicion or a hint that the General Medical Council had failed to do their duty. Everything that he had heard had convinced him that the Council were right, and with the testimony of the Privy Council that they had done their duty he saw no reason why the Council should change their opinion.

Professor GAIRDNER did not think the Apothecaries' Hall were justified in asking for examiners in medicine—the subject for which they themselves were responsible. He was

against giving them such a prop. It was not in accordance with the spirit of the Act that they should get it. As a matter of fact it would be flying in the face of the Act if the Council were to appoint examiners to supplement deficiency in the subject for which they were legally responsible. He thought that they should tell the Privy Council that it was not within their duty to prop up weak bodies.

Dr. MCVAIL'S view was that the Council was not limited to the appointment of examiners where an independent body could not form a combination with another such body. The Act provided that such examiners should be provided as would make examinations efficient. It might be right that the Hall should cease to be a licensing body, but they should not try to drop it by refusing the present application. Rather let them go to the Government for an Act to get rid of it. He should vote for the motion.

Dr. MACALISTER said that as the Apothecaries' Hall took action under Clause 19 of the Act, they charged the Council with having failed to discharge their duty. But the duty of the Council was to maintain the standard of the examination, and he could not see how that could be done by making appointments on the nomination of the doubtful body. If they were to appoint as desired they would be selecting men who would not only be examiners, but would be inspectors and visitors at the same time, an arrangement that on the face of it was impossible. He thought their answer to the Privy Council must be that they had given that Council's suggestion most careful consideration, but that as its adoption would not enable them to maintain their statutory duty they could not accede to it. If they gave such an answer he thought the Privy Council would have the answer they desired.

Dr. HERON WATSON thought it would be only fair to the Apothecaries' Hall to give their application every consideration. Some of the members of the Privy Council had apparently thought more consideration was necessary.

When Dr. Heron Watson resumed his seat a motion was made for the suspension of the Standing Orders, so as to enable the Council to sit beyond the usual hour of adjournment with the object of finishing the subject under discussion; and in securing assent to it the President mentioned that if the matter was not disposed of to-day it could not be resumed on Thursday, as consideration of penal cases was to proceed on that day.

Sir WILLIAM TURNER would have been pleased if the representative of the Royal College of Surgeons in Ireland could have given the Council some hint that would lead them out of the difficulty they were in. His belief was that it was quite within the power of that College to so reconsider the whole situation that the Conjoint Board for Ireland could be put on a basis which would prove satisfactory. During its brief existence the Conjoint Board had not been on a satisfactory basis, and he thought that that had led to all the difficulties they had had to contend with in this Irish case. It was the opinion that the College had only to look after the matter of surgery and the Apothecaries' Hall that of medicine. That seemed to him to be an absolutely erroneous principle to regulate the functions of the Conjoint Board. What he held was that the partners were equally responsible for efficiency in both subjects. Even at this late stage he had to appeal to Sir Philip Smyly whether it was not possible to arrive at an adjustment on their own side of the Channel. Why should they come to the General Medical Council to have the differences between the bodies adjusted? Or why should they go to the Privy Council? They might with a little sweet reasonableness adjust their differences within their own halls. It would be a very judicious thing if they were to take this matter into consideration, for he must confess that he did not like the position of having to vote for the motion that was before the Council. Yet if he voted against it and it was lost the matter would go back to the Privy Council. He liked that even less, for he should not care to see the Privy Council stepping in and appointing the Examiners in Medicine and Surgery that the Apothecaries' Hall were applying for. It was quite within the bounds of probability that, if the General Medical Council refused, the Privy Council, although knowing nothing about the matter, would appoint. He found that the Privy Council attached great importance to the largeness of the minority on the last vote, and if the minority continued as large was there not the likelihood that they would not hesitate to appoint? Of course, a board appointed by the Privy Council would loom into such importance that the Boards of the Royal Colleges of Physicians and Surgeons would sink into insignificance, and therefore it was a most important question for these bodies whether their action should lead to the creation in Dublin of an examining board with State sanction. As there was no other proposal before the Council if he had to vote he should vote in favour of the motion, little as he liked it.

Mr. BRUDENELLL CARTER, as the representative of the Society of Apothecaries of London—the only analogous body represented on the Council—pointed out that it was the opinion of his society that if the Dublin application were refused it would weaken their position. That being so, he had a divided duty on this subject, for if he were influenced solely by what he considered to be the good of the public, he should vote against the motion.

The PRESIDENT thought there was something worthy of consideration in Sir William Turner's suggestion. He should be sorry indeed if the General Medical Council got into difficulty with the Privy Council.

Sir WILLIAM TURNER thought he might venture to propose an amendment to the motion. He moved: "That the Council defers for the present any expression of opinion on the application of the Apothecaries' Hall of Ireland for the appointment of assistant examiners in medicine and surgery, and directs communications to be made to the Apothecaries' Hall of Ireland and the Royal College of Surgeons of Ireland with a view to the reconsideration of their respective positions, so that such a combination may be effected between them as may ensure that an efficient standard of examination will be maintained by the Conjoint Board of Examiners as would be satisfactory to the Medical Council."

This proposal was seconded by Mr. TEALE.

Mr. TICHBORNE asked whether, if the two bodies were to combine, the Medical Council would appoint the examiners.

Sir WILLIAM TURNER replied in the negative. The existing combination between the Irish Surgeons and Apothecaries' Hall would not be at an end for six years, for it would continue in existence for the sake of those who had entered for its diploma previous to the separation in June last. What he would like to see was the strengthening of the combination in such a way as to bring out a mutual sense of responsibility. He thought the Privy Council would be willing to wait to see what might come out of the reconsideration he suggested.

Sir PHILIP SMYLY said the Royal College of Surgeons had given him no instructions on the matter involved in Sir William Turner's suggestion, but from what he knew—and speaking in presence of the President of his College—he could not help feeling that the College separated from the Hall because the former were held responsible when they had no voice whatever as regards medicine. The College would not, he thought, open this question again unless they were to get a very important part in connexion with the appointment of examiners.

Sir WILLIAM TURNER: That is a matter of arrangement between the two bodies.

Dr. MCVAIL suggested that Mr. Tichborne should withdraw his motion in favour of Sir William Turner's proposal.

This suggestion was assented to, and the President was proceeding to put Sir William Turner's proposal to the vote when

Dr. MACALISTER said that he wished to discuss the motion as involving not only the rehabilitation of the Apothecaries' Hall, but a new departure for the Council to make in intervening between two independent licensing bodies.

Dr. LOMBE ATTHILL thought the Council ought to adjourn. The usual hour of sitting had been exceeded, and if they went on discussing the case they might have an all-night sitting.

Dr. MACALISTER moved the adjournment.

Dr. BATTY TUKE seconded.

The Council divided, when there voted for the adjournment 17; against, 10.

The Council accordingly adjourned.

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THURSDAY, JUNE 4TH.

The Council met again to-day, Sir RICHARD QUAIN presiding. The first thing done was to pass a new standing order to regulate the procedure in penal cases where a decision is postponed, and, that matter settled, the Council proceeded to adjudicate upon the charges of professional misconduct in the programme of business. Our report of what was done will appear next week.

# Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the M.B. Pass Examination, May, 1896:—

FIRST DIVISION.

Briggs, John Arthur Oswald, St. Bartholomew's Hospital.
Genge, George Gilbert, St. Thomas's Hospital.
Heath, Arthur, St. Bartholomew's Hospital.
Legg, Thomas Percy, St. Bartholomew's Hospital.
Leicester, John Cyril Holdich, B.Sc., University College.
Waldron, Francis Thomas, London Hospital.
Wells, Thomas Henry, Middlesex Hospital.

SECOND DIVISION.

Clough, James Arthur, Leeds Medical School.
Davies, John Edgar Philip, B.Sc., St. Mary's Hospital.
Ducat, Arthur David, St. Bartholomew's Hospital.
Ganner Joseph, Mason College.
Gerrard, Alfred Henry, University College.
Griffiths, John Alban Kendall, University College.
Gullan, Archibald Gordon, University College, Liverpool.
Hibbert, Joseph Coote, University College.
Hugo, James Henry, St. Bartholomew's Hospital.
Instone, Noel, Guy's Hospital.
Johnston, Robert Macfie, University College.
Leon, John Temple, B.Sc., St. Mary's Hospital.
Le Pelley, Amelia Maitland, London School of Medicine for Women.
Lyle, Herbert Willoughby, King's College.
Mackenzie, Rachel Elizabeth W., London School of Medicine for Women.
Maughan, James, Royal Infirmary, Liverpool, and University College, London.
Murray, John Hanna, University College.
Nolan, Harold, Guy's Hospital.
Rait, John Walter Forbes, University College.
Skey, Arthur Richard Harrie, St. Bartholomew's Hospital.
Smith, Graham Udale, King's College Hospital.
Stevenson, Thomas Henry Craig, University College.
Thomas, Evan, University College.
Townend, Richard Hamilton, London Hospital.
Warde, Wilfrid Brougham, St. Bartholomew's Hospital.
Wilson, Francis Kenneth, Westminster Hospital.
Wise, Harry Mortimer, Guy's Hospital.

AN Exhibition of Manufactures, Appliances, and Inventions for the Saving of Life is to be held at the Central Hall, Holborn, from July 9th to 18th next in aid of the Guy's Hospital Fund. Demonstrations by members of the St. John Ambulance and the Life-saving Society will be given and many other attractions will be offered.

LITERARY INTELLIGENCE.—The following are among the new works announced as nearly ready by Messrs. J. & A. Churchill:—"On the Pathology of the Contracted Granular Kidney and the Associated Cardio-Arterial Changes," by Sir George Johnson, M.D., F.R.S., with twenty-nine illustrations. "On Gallstones or Cholelithiasis," by Dr. E. M. Brockbank. "A Contribution to the History of the Respiration of Man," being the Croonian Lectures for 1895, by Dr. William Marcet, F.R.S., illustrated with diagrams (in preparation).

ROYAL MEDICAL BENEVOLENT COLLEGE.—The following is a list of the successful candidates at the election held on May 29th:—Pensioners: Rhoda H. Bishop (Pugh Pensioner), 9727; Robert Whitby, 4430; Richard D. Larke, 3915; Margaret T. Mackenzie, 2421; William Downes, 2396; Caroline F. Dain, 2244. Foundation Scholars: Frederick O. Reese, 7750; Frank C. Anderson, 6711; Frank S. Cannell, 6546; Maurice B. Tribe, 6350; Albert Winter, 5879; Guy T. S. Taylor, 5313; T. S. B. F. de Chaumont, 4713; Walter F. V. Scott, 4599; Robert H. Hilliard, 4522.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Fellows held on Monday, June 1st, for the election of President, Vice-President, Secretary, and Council of the College for the ensuing year, the following gentlemen were elected:—President: W. M. Thomson, F.R.C.S. Vice-President: Kendal Franks, F.R.C.S. Secretary: Sir Charles A. Cameron, F.R.C.S. Council: Archibald H. Jacob, F.R.C.S., Edward Hallaran Bennett, F.R.C.S., Henry Gray Croly, F.R.C.S., Sir Philip Crampton Smyly, F.R.C.S., Robert Lafayette Swan, F.R.C.S., Sir Wm. Stokes, F.R.C.S., Henry Rosborough Swanzy, F.R.C.S., Sir Thornley Stoker, F.R.C.S., William Ireland Wheeler, F.R.C.S., Austin Meldon, F.R.C.S., D.L., Wm. Carte, F.R.C.S., Sir Charles A. Cameron, F.R.C.S., Frederick Alcock Nixon, F.R.C.S., Richard D. Purefoy, F.R.C.S., Charles Bent Ball, F.R.C.S., Henry Fitzgibbon, F.R.C.S., Arthur Henry Benson, F.R.C.S., Francis T. Heuston, F.R.C.S., and John Lentaigne, F.R.C.S.

AT the annual general meeting held on Friday, the 29th ult., Sir Arthur Watson, Bart., Q.C., and the Right Hon. A. J. Balfour, M.P., were elected Vice-Presidents of the Royal Medical Benevolent College.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting was held on May 15th at King's College, Professor Thane being in the chair. Mr. Keith showed specimens from subjects preserved in formaldehyde which gave rise to a discussion in which the general opinion was that while this substance was very useful for the viscera, it rendered the muscles brittle and easily destroyed. Mr. Keith also demonstrated the relation of the spinal accessory nerve to the jugular vein and transverse process of the atlas, and read a note on the ligamentous bands lying over the infraspinatus muscle. Mr. Hertslet showed two specimens of Rudimentary Ribs on the seventh and eighth vertebræ respectively. Dr. L. Freyberger showed a specimen of Congenital Malformation of the Heart and Thoracic Veins. Professor Wardrop Griffith showed a specimen of Diverticulum of the Larynx and of Fusion of the Occipital Bone with the Atlas. Professor Symington read a paper on the Anatomy of Genu Valgum Adolescentium, and gave a demonstration of sections of the brain of the Echidna. Professor Sherrington gave a lantern demonstration of the Skin Areas supplied by the various Spinal Nerves in Macacus Rhesus. Professor Paterson read a paper on the Cutaneous and Muscular Supply of the Spinal Nerves in Man.

MEDICAL MEN AND FRIENDLY SOCIETIES.—The delegates of the Oddfellows Friendly Society held their annual conference in Bristol last week. At the meeting on May 28th Mr. C. S. Reyworth of Lincoln proposed: "That the Parliamentary agent be instructed to use his best endeavours to obtain a clause in the Friendly Societies Act enabling medical men to take positions as doctors of friendly societies' medical associations without let or hindrance." A long debate followed, and it was alleged that medical men were now starting rival associations and canvassing for members. A delegate, Mr. P. G. Walton, said that in these days they heard a great deal about combination of labour. Were not medical men quite as much justified as any other body of men in combining? Was there any law which would allow trades unions to join together to obtain a certain rate of wages and to deny that right to other classes? It became a fight between themselves and the medical men as to which would obtain the victory. He agreed with a previous speaker that the law of supply and demand would settle the matter. The whole question had been before the Friendly Societies' Conference and a resolution had been passed "that the committee of this conference be requested to consider the present action of the medical profession towards medical societies." The resolution was rejected by 235 to 195, a majority of 40.

DIPHTHERIA IN LONDON.—The prevalence of diphtheria in London during the four weeks ended May 16th was greater than in the four weeks ended April 18th by over 100 notifications. The number in the later period was 890, yielding a weekly average of 222 cases, against an average of 196 in the April period. The deaths were, however, lower—namely, 161 against 183, and the per case mortality was 18·1 as compared with 23·3 per cent. There were four sanitary districts with 50 notifications and upwards, totalling to 283 in all, as compared with three districts totalling to 197; while in the earlier period all save one of the sanitary areas were invaded. The several four-weekly periods up to May 16th have witnessed notifications as follows: 988, 1054, 1009, 785, and 890, and the period in 1895 corresponding to the latter saw 946 notifications. In the week ended May 23rd the deaths from diphtheria in London were as many as 56, as compared with 36, 41, and 43 in the three preceding weeks, and were, moreover, 26 in excess of the corrected average for the twenty-first week of the ten years 1886–95. Last week the deaths fell to 40, but they were still 10 above the average for the corresponding week of the decennium. In the two weeks there occurred 15 deaths in Islington and 13 in Camberwell. Of the total 96 deaths, 89 were of persons aged between one and twenty years. Last week 75 admissions to hospital were notified, against 101, 104, and 99; and on Saturday last there remained under treatment 704 patients. In the fortnight there occurred in Greater London 22 deaths from the disease, and 7 of these belonged to Plaistow registration sub-district.

PRESENTATION TO A MEDICAL PRACTITIONER.—Dr. Henry C. Moore, of Dandenong, Victoria, Australia, where he had practised for upwards of sixteen years, on his leaving was the recipient from the residents of the district of a handsome illuminated address and a purse of sovereigns.

A COMPLIMENT TO A MEDICAL PRACTITIONER.—Mr. Joseph H. Wilson, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Warren, New South Wales, was entertained in the Shakespeare Hall by a numerous company of the inhabitants, the Mayor of Warren presiding, at a complimentary evening entertainment prior to his departure for Europe for some time, with the view, however, of returning to permanently reside at Warren.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

*Public Health (Scotland) Bill.*

IT is understood that when the Public Health (Scotland) Bill has been read a second time it will be referred to a Grand Committee mainly composed of Scottish members. If this course be adopted the proceedings, unlike those of the committee of the House of Lords which dealt with the Bill, will be conducted in public.

*Poor-law Officers' Superannuation Bill.*

When this Bill comes up for consideration on report clauses will be moved extending the scope of the measure to Ireland and providing a system of superannuation for nurses and attendants on the sick in the employment of Poor-law guardians.

*Cycling Mishap to a Minister.*

Mr. Ritchie, President of the Board of Trade, returned from the Whitsun holidays with a sprained ankle which he got while cycling in the country. He was only able to walk into the House with the aid of two stout sticks, and when the Light Railways Bill, which is under his charge, came on and divisions were frequent the Speaker made a dispensation in his favour and allowed him to record his vote at the table instead of going to the division lobby each time.

## HOUSE OF COMMONS.

MONDAY, JUNE 1ST.

*The Snowdon Railway Accident.*

In reply to a question Mr. Ritchie, President of the Board of Trade, stated that the engineers were of opinion that the accident on the Snowdon Railway was caused by the locomotive mounting the rack, probably in consequence of a subsidence of the permanent way due to the melting of snow in a cutting. As the line was not constructed under any statutory authoritory the provisions of the Railway Acts as to inspection did not apply, and the Board of Trade had no power in the matter. On the recommendation of the company's engineers no passenger traffic had been carried since the date of the accident, and none would be carried pending the adoption of certain additional precautions suggested by the engineer to prevent the engine mounting the rack.

TUESDAY, JUNE 2ND.

*Diseases of Animals Bill.*

A large part of this day was devoted by the House of Commons to the consideration in Committee of the Bill of the Government to make statutory the present regulations prohibiting the importation of live cattle from abroad, and while a great number of amendments were proposed not one of them was carried, and the measure consequently proceeds to the third reading stage in exactly the same form as it was introduced.

Mr. Sydney Buxton, Under-Secretary for the Colonies in the late Administration, put forward an amendment enabling the Board of Agriculture to exempt from slaughter at the port of entry cattle arriving from any of the British colonies. He laid special emphasis on the case of Canada and said that the experience of three and a half years went far to prove the Canadian contention that if disease existed at all in Canadian cattle it was not contagious pleuro-pneumonia.

Mr. William Allan (Gateshead) said that the Canadian cattle were free from disease when shipped, but sometimes on board ship they caught what was called a "sea chill," which produced inflammation of the nostrils corresponding to human catarrh. From this they recovered after being a few weeks in this country.

Mr. Walter Long, President of the Board of Agriculture, in resisting the amendment, said that at the request of his predecessor in office an exhaustive inquiry into the question of the health of Canadian cattle was held by Sir Henry James and Dr. Burdon Sanderson, and anyone who read the evidence taken by those gentlemen must come to the conclusion that it was clearly established beyond all doubt that contagious pleuro-pneumonia existed amongst cattle imported from Canada. He was confident that the Canadian Government did their best to save their herds from infection; but their great difficulty was that they had a frontier thousands of miles in extent, and that on the other side of that frontier, in the United States, pleuro-pneumonia existed, as the Canadian Government admitted. The Canadian Government did their best to protect themselves from the importation of the disease from the United States; and the Government of the United States took exactly the same view of the action of the Government of Canada as the Canadian Government took of the action of the Imperial Government—namely, that contagious pleuro-pneumonia did not exist in their country and that the prohibition of their cattle was unnecessary and harsh. But it was not the fact to say that there had been no cases of the disease discovered amongst Canadian cattle since 1893, when the inquiry was held. Eight cases were discovered in 1893, six in 1894, and two in 1895. There could be no doubt whatever, from the evidence of the scientific advisers of the Board of Agriculture, that the disease found amongst those cattle was not, as the Canadian Government asserted, simple pleuro-pneumonia or transit pneumonia, as the hon. member for Gateshead contended, but contagious pleuro-pneumonia; and that being so, it was impossible for the Agricultural Department, in justice to the stock-owners of this country, whose interests they were bound to safeguard, to accept the amendment.

When the amendment was taken to a division 57 members voted for it and 140 against it.

# Appointments.

***Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.***

ALEXANDER, B. ADOLPHUS, L.D.S.R.C.S. Eng., has been appointed Dental Surgeon to the Western Skin Hospital, Great Portland-street, London.

BLABER, P. L., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

BLOUNT, G. B. C., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BROMET, E., M.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Hospital for Women, Soho-square, W.

CHANING-PEARCE, A., M.B., B.S. Lond., has been appointed House Surgeon to the Kent County Ophthalmic Hospital, Maidstone.

CONFORD, G. J., B.A., M.B. B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

CROUCH, H. C., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

DE SANTI, PHILIP R. W., F.R.C.S., has been appointed Lecturer on Aural Surgery to the Westminster Hospital Medical School.

DIXON, C. A., M.R.C.S., L.R.C.P., has been appointed Junior Anæsthetist to the General Infirmary, Leeds.

DUBRANT, C. E., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

DYBALL, B., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

HANWELL, G. L., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

HARTLEY, J., M.B., B.Ch. Vict., L.R.C.S., L.R.C.P. Edin., has been appointed Junior House Surgeon to the Ancoats Hospital, Manchester.

HAYNE, LOUIS B., M.B., B.C. Cantab., has been appointed House Physician to the Victoria Hospital for Children, Chelsea.

HICHENS, P. S., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Physician to St. Thomas's Hospital.

HILL, R. A. L., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Chichester Infirmary.

HODGINS, WALTER W., M.D., B.S. Durh., M.R.C.S., L.R.C.P., has been appointed Honorary Medical Officer to the Holloway and North Islington Dispensary.

JONES, MABEL, M.D. Lond., has been appointed House Surgeon to the Victoria Hospital for Sick Children, Hull, vice Miss D. Caine, M.B., resigned.

KENT, P. W., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

KNOCKER, W. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

LAING, J. A., M.B., C.M. Edin., has been appointed Surgeon and Medical Officer to the Akaroa Hospital, New Zealand.

LAMBERT, P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 3 Sanitary District of the Newbury Union, vice F. H. Lyon, resigned.

LIGHTFOOT, CHAS. L., M.D., C.M. Edin., M.R.C.S., has been appointed Surgeon to the Northumberland, Durham, and Newcastle Eye Infirmary, vice H. W. Davies, resigned.

LYONS, EDWARD, M.B., B.Ch., B.A.O. Dubl., L.M. Rotunda, has been appointed Senior Resident Surgeon to the Jervis-street Hospital Dublin.

MAUNSELL, JOHN, L.R.C.P., L.R.C.S. Irel., has been appointed Government Medical Officer at Ensiow, Western Australia.

MORRISON, A., L.R.C.P., L.R.C.S. Edin., has been appointed Vice-Chairman of the Board for the Protection of Aborigines, Victoria, Australia.

NASH, E. H. T., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

OLDFIELD, C., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Junior Anæsthetist to the General Infirmary, Leeds.

PALIN, E. W., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Physician to St. Thomas's Hospital.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

POTTER, E. FURNISS, M.D. BRUX., M.R.C.S., L.R.C.P. Lond., has been appointed Acting Anæsthetist to the London Throat Hospital, Great Portland-street, W.

PRAIN, J. L., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

PRIDEAUX, C. S., L.D.S. Eng., has been appointed Honorary Dental Surgeon to the Dorset County Hospital, Dorchester.

RICHARDS, L. W., M.B., B.S. Durh., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

ROLSTON, JOHN R., L.R.C.P. Edin., M.R.C.S., has been appointed Honorary Surgeon to the Plymouth Royal Eye Infirmary, vice W. Square, deceased.

RUDDLE, R. G., M.D., Ch.B. Melb., has been appointed Medical Officer of Health for Mount Franklin Shire, Victoria, Australia.

SCANTLEBURY, GEO. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Moorabbin Shire, South Riding, Victoria, Australia.

SCOTT, C. H., M.B., Ch.B. Melb., has been appointed Medical Officer and Vaccinator for the District of Bourke, New South Wales.

SHUTER, R. E., M.B., Ch.B., Melb., has been appointed *pro tem.* Health Officer at Port Augusta, South Australia.

SLATER, H., L.S.A., has been appointed Resident Medical Officer, Quarantine Officer, and Public Vaccinator for the District of Karridale, Western Australia.

SMITH, J., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

TAGGART, J. SCOTT, M.B., Ch.B. Vict., has been appointed Senior Resident Medical Officer to St. Mary's Hospital for Diseases of Women and Children, Manchester.

TAYLOR, G. E. O., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

THOMPSON, WALTER, F.R.C.S., has been appointed Senior Anæsthetist to the General Infirmary, Leeds.

TOOMBS, H. G., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

WALLACE, L. A. R., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

WARWICK, JAMES, M.B., C.M. Aberd., has been appointed Resident Medical Officer to the Burnley Victoria Hospital.

WILSON, C. W. GRANT, L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60 per annum, with board and lodging, but no wines, spirits, or beer.

BRENTFORD UNION.—Medical Superintendent of Infirmary and Medical Officer of Workhouse and Schools. Salary £250 per annum, with furnished residence in the Infirmary, rations, washing, &c., or £300, with furnished residence, washing, &c. Also Assistant Medical Officer, unmarried. Salary £100 per annum, with furnished apartments in the infirmary, rations, washing, &c. Applications to the Clerk to the Guardians, Union Offices, Isleworth, W.

CHESTER GENERAL INFIRMARY. — Visiting Surgeon, for two years. Salary to commence at £90 per annum, with residence and maintenance in the house.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CRICHTON ROYAL INSTITUTION, Dumfries.—Third Medical Assistant. Salary to commence at £100 per annum, with board and residence. Applications to Dr. Rutherford, Medical Superintendent.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.

HEREFORD COUNTY AND CITY LUNATIC ASYLUM.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

HOSPITAL AND DISPENSARY, Newark-on-Trent.—House Surgeon; unmarried. Salary £80 per annum, with board and lodging. Will be required to do the Dispensing, for which a further salary of £40 is paid.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon to Out-patients (non-resident), for six months. Salary 25 guineas.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £110 per annum, furnished apartments, coal, gas, and attendance. Applications to Hon. Sec., High-street, Lewes.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrar. Salary £100 per annum. Also Assistant Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N. — Assistant Resident Medical Officer, for six months. Residence, board, and washing provided.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon. Unmarried. Salary £90 per annum, with apartments, gas, coals, and washing free. The House Surgeon is usually appointed by the committee of the House of Industry as medical attendant at that institution at a salary of £10 per year. Applications to Hon. Sec., 25, Athol-street, Douglas, Isle of Man.

PARISH OF CREICH (Sutherland).—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £45 per annum; as Vaccinator, the statutory fees, with an allowance of £5 per year on certain conditions. Applications to Inspector of Poor, Bonar Bridge, Sutherland.

PARISH OF KINCARDINE, Ross.—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £42 10s. per annum, as Vaccinator the statutory fees, with an allowance of £5 per year on certain conditions. Applications to the Chairman of the Parish Council, Ardgay, Ross.

ROYAL FREE HOSPITAL, Gray's-inn-road, London, W.C. — House Surgeon for six months. Board, residence, and washing provided.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street, London, W.—Surgeon.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon, for six months. Board and lodging provided. Also Physician for Diseases of Women.

# Births, Marriages, and Deaths.

## BIRTHS.

FOULERTON.—On May 29th, at Carlisle-mansions, Victoria-street, S.W., the wife of Alexander G. R. Foulerton, F.R.C.S., of a daughter.

HOUGHTON.—On May 31st, at East Looe, Cornwall, the wife of Leonard F. Houghton, M.R.C.S., L.R.C.P., of a son.

LUND.—On May 29th, at "Sandywood," Pendleton, Manchester, the wife of Herbert Lund, F.R.C.S., of a son.

PLOWMAN.—On June 2nd, at Eagle House, Clapham-common, S.W., the wife of T. A. BARRETT PLOWMAN, M.R.C.S., L.R.C.P., of a daughter, prematurely.

ROBERTSON—On May 11th, at Alicedale, Cape Colony, the wife of C. Robertson, L.R.C.P., M.R.C.S., J.P., of a daughter.

SANDALL.—On May 27th, at Park-lane, Alford, Lincolnshire, the wife of T. Edward Sandall, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., of a son.

SPEECHLY.—On May 21st, at Parkgate, Cheshire, the wife of H. M. Speechly, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

## MARRIAGES.

FRASER—PHIBBS.—On May 28th, at Highbury Congregational Church, Clifton, by the Rev. Andrew Mearns, Andrew Mearns Fraser, M.B., Portsmouth, son of Geo. Fraser, Reading, to Alfreda Mary, daughter of E. W. Phibbs, Clifton. No cards.

HOVENDEN—PHILLIPS.—On June 1st, at Holy Trinity Church, Selhurst-S.E., Arthur Cecil Hovenden, M.B., B.S. Lond., son of the late Thos. Henry Hovenden, Esq., of South Norwood, to Madeline Bessie, younger daughter of the late William Phillips, Esq., formerly of South-place, Finsbury, and Shepton Mallet.

MUIR—REID.—On June 2nd, at St. George's Church, Hanworth, Middlesex, Harold Muir, M.D. Lond., of Lowestoft, to Violet, second daughter of Nevile Reid, The Oaks, Hanworth.

READ—HUDSON.—On May 23rd, at All Souls, Langham-place, W., by the Rev. Canon J. H. Atcheson, Henry G. Read, M.R.C.S., L.R.C.P., L.S.A., L.D.S. Eng., of 1, Portland-place, W., to Mrs. S. T. Hudson, of Barling House, near Southend, Essex.

SHEPHERD—STACKHOUSE.—On June 3rd, at St. Peter's Church, Stainforth, near Settle, by the Rev. W. Shepherd (brother of the bridegroom), assisted by the Rev. J. Mathias, vicar of the parish, Henry Bowman Shepherd, L.R.C.P. Lond., M.R.C.S. Eng., of Peveril House, Castleton, near Sheffield, youngest son of the late Bowman Shepherd of Bradford and Kirkby Lonsdale, to Ellena, youngest daughter of the late Thomas Stackhouse of Taitlands, Settle.

## DEATHS.

FEARNSIDE.—On May 28th, at Merrow, Bournemouth, Henry Fearnside, M.B. Lond., F.R.C.P., aged 73.

GAYE.—On April 18th, at Stawell, Victoria, Australia, Henry Searle Gaye, M.D. St. And., J. P., of Newton Abbot, Devon, aged 69.

JONES.—On May 3rd, at his residence, William Head, Victoria, W. H. Macnaughton Jones, B.A., M.D. Irel., of Victoria, British Columbia, aged 61.

MCLAREN.—On May 29th, at Newport-road, Cardiff, Kenneth McLaren, M.B. Lond., third son of the late John Wingate McLaren, of pneumonia.

REYNOLDS.—On May 29th, at his residence, Grosvenor-street, W., Sir John Russell Reynolds, Bart., M.D., LL.D., F.R.S., Physician in Ordinary to Her Majesty's Household, aged 68.

SHOPPEE.—On May 31st, at the residence of his father, Sidney Edward Shoppee, M.R.C.S., L.R.C.P., aged 24, second son of Edward Collett Shoppee, of Dudley House, Carleton-road, Tufnell Park.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

**TUESDAY** (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

**WEDNESDAY** (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

**THURSDAY** (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

**FRIDAY** (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

**SATURDAY** (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

**At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.**

## SOCIETIES.

**TUESDAY** (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. S. West: Case of Splenic Anæmia (Spleno-megalie Primitive), with an Account of the Disease.—Mr. H. Gilford (communicated by Mr. J. Hutchinson): A Condition of Mixed Premature and Immature Development.

**THURSDAY** (11th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.).—8 P.M. Card Specimens:—Mr. S. Walker: (1) Tumour of Optic Nerve; (2) Cysticercus of the Conjunctiva.—Dr. B. Taylor: Cases of Cataract Extraction.—Mr. Lawford: Pigmentation of the Conjunctiva.—Mr. Silcock: Lymphangioma of Orbit.—Mr. Juler: Macroblepharon.—Mr. M. Gunn: Acute Bullous Eruption with Associated Affection of the Conjunctiva.—Mr. H. Spicer: Acute Double Optic Neuritis. 8.30 P.M. Papers:—Mr. Rockliffe: (1) Leuco-sarcoma of Choroid; (2) Cataract Extraction and Gout.—Mr. T. Collins: On the Origin of Ruptures in Detached Retinæ.—Mr. W. E. Cant: Cyst of Orbit.—Mr. Snell: (1) Cases of Acquired Nystagmus in Occupations other than that of Coal Mining; (2) Note on Electrolysis in Detachment of the Retina.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.)—8.30 P.M. Specimens will be shown by Mr. O'Callaghan and Dr. Lawrie. Paper:—Dr. F. Barnes: On Some Psychological Consequences of Suppressed Menstruation. A Note by Dr. Holland on a Successful Case of Transfusion.

**FRIDAY** (12th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.)—9 P.M. Prof. Snellen (Utrecht): The Influence of Light on Vision. (Bowman Lecture.)

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY** (8th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Impaired Movement of the Vocal Cords.

**WEDNESDAY** (10th).—HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Schorstein: Non-valvular Disease of the Heart.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Forms of Universal Dermatitis.

**THURSDAY** (11th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Detection of pus, mucus, blood, and bile in urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. F. Taylor: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—4 P.M. Dr. Colman: Treatment of the Common Complaints of Children

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Mr. R. Johnson: Hernia in Childhood.

**FRIDAY** (12th).—LONDON POST-GRADUAT COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, June 4th, 1896.

| Date. | Barometer reduced to Sea Level and 32° F | Direction of Wind. | Dry Bulb | Wet Bulb. | Solar Radia. in Vacuo | Maximum Temp. Shade | Min. Temp | Rainfall | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| May 29 | 30·17 | S.W. | 55 | 52 | 119 | 80 | 48 | ... | Hazy |
| " 30 | 30·14 | N.E. | 58 | 53 | 90 | 61 | 55 | ... | Cloudy |
| " 31 | 30·22 | S.W. | 61 | 54 | 109 | 70 | 50 | ... | Hazy |
| June 1 | 29·96 | S.E. | 57 | 52 | 117 | 80 | 48 | ... | Hazy |
| " 2 | 29·70 | S.E. | 66 | 57 | 127 | 85 | 55 | ... | Hazy |
| " 3 | 29·72 | S.W. | 67 | 60 | 99 | 73 | 64 | ... | Hazy |
| " 4 | 29·81 | S.W. | 67 | 62 | 119 | 78 | 59 | 0·54 | Hazy |

# Notes, Short Comments, and Answers to Correspondents.

## EDITORIAL NOTICE.

**IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.**

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only.*

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of THE LANCET should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

*L.S.A. Lond.*—The origin of the violation of Mr. Anderson's rights as a Licentiate of the Society of Apothecaries of London was that he attended Mrs. Marshall of Tobago both as a surgeon and as an apothecary. On being treated rudely by the husband Mr. Anderson retired from attendance on the case, which is one of necrosis of the inferior maxilla. For this retirement the patient and her husband brought an action against Mr. Anderson for £15 damages for negligence. It was proved by medical witnesses on both sides that there had been no negligence, that the patient had sustained no injury by the retirement, had recovered entirely through Mr. Anderson's treatment, and was nearly well when he retired. For the retirement from the case the judge gave damages of £10 and costs, made Mr. Anderson's charges for three months' attendance a counter claim, and deprived him of them on the grounds that a medical man has no right to refuse his services or to stipulate for payment for his services, or to retire from the case without the leave of the patient under any circumstances. The judge in this case, therefore, has violated Mr. Anderson's right to charge and recover for his services, and has punished him by damages and costs for the exercise of his rights as an apothecary. This illegal judgment was enforced by a levy on his effects, by imprisonment, excessive tail, and other violent measures. It is now declared that for these injuries done by judges Mr. Anderson has no right of remedy—i.e., that in the presence of judges Licentiates of the Worshipful Society of Apothecaries have no rights under their charter. (*Q. E. D.*) For full information *vide* THE LANCET of Feb. 29th, April 18th and 25th, and May 9th and 16th for articles on the Origin, History, and Objects of the Civil Rights Defence Committee, the secretaries of which (5, Mitre-court, Temple, E.C.) will be happy to send the reports post free and to give every possible information.

*J. Kirkby.*—We are obliged for our correspondent's communication and enclosures, but we fear that to comply with his request adequately would require too much space. The fallacies that surround the question and the unfounded assertions that are made over and over again by those opposed to this beneficent practice are legion. No amount of evidence can alter the fixed ideas that have taken possession of some minds. Read McVail's "Vaccination Vindicated," and Edwardes' "Small Pox and Vaccination."

## THE WRIGHT DEFENCE FUND.

*To the Editors of* THE LANCET.

SIRS,—The following additional subscriptions have been received or promised for the above fund since the issue of THE LANCET of May 16th. This brings up the amount to £52 15s. As this is far short of the sum required, the Committee have decided to keep open the subscription list a few days longer and solicit further subscriptions. I have had many suggestions from those who have kindly sent subscriptions in reference to Mr. Wright belonging to a defence union. It is, of course, to be regretted that he was not a member of a defence association, for then in all probability the case would never have been heard of after the first lawyer's letter. The fact of two defence associations being in existence makes many of us careless in not joining any. If we could only have one large association with paid officers we should be able to work the lot for a subscription of 5s. per year, and then there would be no excuse for any one not joining. Thanking you for your cordial coöperation,

I am, Sirs, yours faithfully,

Wigan, June 3rd, 1896. WM. BERRY.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mr. Cooke (Aspull) ... ... | 1 | 1 | 0 | Dr. Rees (Wigan) ... ... | 0 | 10 | 6 |
| Dr. Adam (Liverpool) ... | 1 | 1 | 0 | Mr. Barwise (Southport)... | 0 | 10 | 6 |
| Mr. Chronnell (Hindley) .. | 1 | 1 | 0 | Mr. Whitaker (Horwich)... | 0 | 10 | 0 |
| Dr. Barron (Liverpool) ... | 1 | 1 | 0 | Dr. Rigby (Adlington) ... | 0 | 10 | 6 |
| Mr. G. E. Walker, F.R.C.S. (Liverpool) ... ... ... | 1 | 1 | 0 | Mr. Aspinall (Ainsdale) ... | 0 | 10 | 6 |
| Mr. Cowan (Wigan) ... ... | 1 | 1 | 0 | Mr. H. D. Harthan (Salford) | 0 | 10 | 6 |
| Dr. Dreschfeld, F.R.C.P. (Manchester) ... ... ... | 1 | 1 | 0 | Mr. Robt. Patrick (Bolton) | 0 | 10 | 0 |
| Mr. Kirk (Hindley) ... ... | 1 | 1 | 0 | Dr. Kenyon (Wigan) ... | 0 | 5 | 0 |
| Mr. Hall (Nice) ... ... ... | 1 | 1 | 0 | Dr. Storrs (Southport) ... | 0 | 7 | 6 |
| | | | | Mr. Gibson (Southport) ... | 0 | 5 | 0 |
| | | | | Previous list ... ... ... | 38 | 18 | 0 |

*An Unhappy Victim* has omitted to enclose his name and address.

*M.R.C.S.*—The public notice is not to be commended.

### A DISGRACEFUL ADVERTISEMENT.

THE *Umpire*, a Manchester paper, of May 17th, 1896, contains the following communication in its advertisement columns:—

"INTERESTING LETTER.

"I, Dr. Daniel Sutherland, Surgeon to the New Medical Hall, 243, Sauchiehall-street, Glasgow, hereby intimate to all whom it may concern that I have long studied and treated Confidential Complaints and weaknesses as a principal part of my Practice, both here and in Edinburgh, though never formerly made known by Advertisement, and it is possible this notice may be construed as a breach of professional etiquette; but I think it very pardonable when I consider the number of gentlemen constantly consulting me with their Constitutions injured, and Complaints aggravated, after being for months and years the dupes of Quacks and Druggists. I consider it a righteous necessity in the Public interest to advertise the fact that a Member of the Profession proper devotes his time to the study and treatment of these special Complaints. Gentlemen are therefore inexcusable if they fall into the hands of empirical pretenders. I make free to assure gentlemen entrusting me with their confidence that they may rely upon the highest professional honour, and skilled, conscientious treatment whether they visit me at 243, Sauchiehall-street, Glasgow, or communicate with me by letter, which will have my immediate attention.

"I am, faithfully,

"DANIEL SUTHERLAND.

"Licentiate of the Royal College of Physicians, Licentiate of the Royal College of Surgeons; also of the Faculty of Physicians and Surgeons. For seven years Councillor and Trustee of the City of Edinburgh; and Manager of the Royal Maternity Hospital, Edinburgh; President of the Scottish Christians, Evidence Society; Medallist (Royal College of Surgeons) 1867; awarded Queen's Prize (Science of Chemistry, Kensington Museum, 1863; Public Honours (Royal College of Surgeons) 1869, &c., &c.

"Book free for six stamps on confidential complaints written by Dr. Sutherland as above."

A correspondent has sent us this extract, asking if the corporation to which Mr. Daniel Sutherland claims, beneath his signature, to belong, should not take notice of such a flagrant breach of etiquette. We cannot find any person of the name in the current Register, but a Mr. Daniel Sutherland was struck off on May 20th, 1885. This may be the offender.

*W. G. M.*—We do not recommend individual practitioners.

## "THE TREATMENT OF PLEURITIC EFFUSION."

*To the Editors of* THE LANCET.

SIRS,—Referring to the query of "Ubique" in THE LANCET of May 30th upon the above subject I venture to suggest that in the case mentioned it would be advisable to make an opening in the chest and provide for permanent drainage. I should put in my self-retaining tube figured in THE LANCET of the same date. The object for providing permanent drainage is to allow of the contact of the visceral and parietal pleural surfaces. This by the pressure of contact would at first tend to lessen the amount of fluid thrown out, and later by adhesion to stop its formation altogether, after which the tube would be no longer necessary. This, I think, would be an improvement upon the repeated tappings which have hitherto been necessary, and the lung would not suffer from constant pressure of fluid.

I am, Sirs, yours truly,

Cardiff, June 2nd, 1896. CORNELIUS A. GRIFFITHS, F.R.C.S.Eng.

## MILITARY MEDICAL RECOLLECTION.

*To the Editors of* THE LANCET.

SIRS,—During active service in the Straits Settlements in 1875, when stationed at Qualla Jumpole, I knew a soldier in the 10th Regiment who was keen to kill a tiger. Having heard from a native that his buffalo had been killed the night previously he hurried to the river of the above name, and after waiting for some time he saw a tiger on the opposite side of the river approaching the dead buffalo he had partially devoured the night before. The sight was too much for "Tommy's" nerves, and having discarded his rifle and ammunition he fled back to camp, about two miles away, went straight to bed, and was successfully treated by me for a typical attack of typhoid fever.

I am, Sirs, yours truly,

Newcastle-on-Tyne, May 24th, 1896. J. HOYSTED.

*H. A. B.* will be very ill-advised to complain to the General Medical Council of anyone unless he is able to *prove* the subject of complaint.

## "THYROID FEEDING."

*To the Editors of* THE LANCET.

SIRS,—In reply to your correspondent "P. W." I have had experience in thyroid feeding and would suggest as follows: That the quantity given in the first week should not exceed one fresh gland in divided doses. Thus, one-quarter of a fresh gland may be given as a start on alternate mornings. It is preferable, in my opinion, to increase the dose by diminishing the intervals rather than by increasing the amount of each individual dose. One-quarter of a fresh gland will be found a full adult dose for a start at any rate. For myself, I would recommend unless there are special reasons to the contrary, that one or other of the various preparations of thyroid gland be used in preference to the fresh gland, for the reason that patients then regard it more as a medicine and are far less likely to overdose themselves. If, however, the fresh gland is for any reason decided upon it should be obtained from the butcher with the trachea still attached, and, for at any rate the first time, be examined and separated by the surgeon himself, otherwise strange mistakes are apt to arise and various other organs or glands to be substituted. Having obtained and cleaned the gland it may be administered either raw or very lightly cooked. In the former case it is sufficient to finely mince the amount of gland to be administered, season it if desired with pepper and salt, and give as a sandwich between bread and butter. In the latter case an easy way to prepare the gland is to fry it much in the same way as kidneys are cooked for breakfast but, of course, to a very much less degree. A very slight amount of cooking does not appreciably diminish the activity of the gland. That there is danger in excessive doses cannot for a moment be doubted by anyone who has once seen a case. Thus a patient of mine, a woman aged forty years, stout but otherwise healthy (I hope shortly to publish an account of her case), contrary to explicit directions, started by taking an entire gland lightly cooked on three successive mornings, and, to quote her own words, "I had a fearful trembling inside, my knees trembled and I could scarcely stand, my hands shook, and I had a fearful headache the first thing in the morning which used to wake me in the night with the pain." She left them off, but again, about a fortnight later, without my previous knowledge, ate two small glands at once in the morning. They produced the same effect on the same day. She left off again but seventeen days later she commenced taking capsules, eight of them being equal to one whole gland. One capsule caused a feeling of faintness on the same day, the pulse being 64 and the temperature 95·2° F. I may perhaps mention that other patients who had not previously taken the raw gland have taken one or more capsules in the day without ill effects. Apologising for the length of this letter,

I am, Sirs, yours truly,

MURTAUGH HOUGHTON,

Late Resident Medical Officer, Manchester Consumption Hospital.

Ilford, May 25th, 1896.

ERRATUM.—The address of the Red Cross Germicide Co. is 61½, Fore-street, E.C., and not as stated in our New Invention notice of May 23rd. We are asked to state that the inhaler, which is the invention of Dr. Siemon, has been patented in England.

**During the week marked copies of the following newspapers have been received:**—*South Wales Daily News, Cromer Post, Bath Chronicle, Sussex Daily News, Leicester Post, Brighton Gazette, Northern Whig, Worcestershire Chronicle, Devon Gazette, Liverpool Daily Post, Bradford Observer, Epicure, Belfast News Letter, Eastern Morning News, Croydon Guardian, Bolton Chronicle, Yorkshire Post, Western Daily Mercury, Sheffield Daily Telegraph, Carlisle Express, Times of India, Birmingham Post, Liverpool Courier, Kingston News, Pioneer Mail, Mid-Surrey Gazette, Bristol Mercury, Builder, Preston Guardian, Leeds Mercury, Blackpool Gazette, Architect, Scotsman, Daily Chronicle, Lincolnshire Echo, Tit-Bits, Retford Times, Light, St. Mary's Hospital Gazette, Bradford Daily Telegraph, Formby Times, Reading Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, Hertfordshire Mercury, City Press, Nottingham Daily Guardian, Surrey Advertiser, Local Government Journal, Gloucestershire Chronicle, West Ham Herald, Dover Express, Coalville Times, Hemel Hempstead Gazette, Guernsey Standard, Worcester Echo, Evening Post (Jersey), Public Opinion, Rossendale Free Press, Kelso Mail, Civil and Military Gazette (Lahore), Dundee Advertiser, Thanet Guardian, Harwich Chronicle, Macclesfield Courier, North British Agriculturist, &c. &c.*

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# THE LANCET

## SPECIAL SUPPLEMENT

IN SUPPORT OF THE

# METROPOLITAN HOSPITAL SUNDAY FUND

*Published in aid of the Appeal to be made on Sunday, June 14th, 1896.*

## THE HOSPITALS OF THE METROPOLIS AND THEIR CLAIMS ON THE PUBLIC.

ONCE more it becomes our duty to lay before the readers of THE LANCET and the general public, for whose beneficent consideration this Annual Special Supplement is as much prepared as it is for that of our customary professional audience, the claims of the Metropolitan Hospital Sunday Fund upon the sympathy and practical assistance of all London.

We have made this appeal for the Fund on ten previous years. Therefore, although we have approached the subject from different directions on different occasions, and have dwelt at length now on this and now on that phase in the history of hospital work in the metropolis, we feel that to many the subject has, perchance, become threadbare. It may even have lost its interest for them altogether through this familiarity, inasmuch as our main tale must always be the same. Vary the rendering of it how we will the gist of what has to be said in these Supplements is now what it has been on the previous occasions, and the following words will sum it up:—The hospitals of London do noble work; the amount done by them is out of all proportion to their incomes; the slender incomes, being derived mainly from fortuitous charity, are precarious and liable to fluctuations; London, the city of untold wealth, should be able to furnish not only adequate but regular hospital accommodation for its suffering poor; Hospital Sunday furnishes the inhabitants of the metropolis with a regular and annual opportunity of showing their appreciation of the splendid work done by these medical charities; therefore, Give, GIVE, GIVE.

We propose this year to ask our readers to consider the Metropolitan Hospital Sunday Fund in particular from the following points of view. The Fund is one of the most important sources of income that many of the London hospitals possess. By the annual reccurrence of its benefits the good done by it is enormously enhanced, for the regularity of the donations adds to their value inasmuch as it imports a sadly wanted element of order into hospital finance. And we also submit that as the metropolis grows the Fund should grow with equal steps, constituting itself a kind of universal rate, given out of good will. More forcible appeals, and pleas more likely to attract the public compassion, could easily be put forward, but a mere perusal of the figures in the various tables will tell the tale of the merciful work done. We shall on this occasion confine consideration of the Fund to the limits just indicated, feeling that in this way unanswerable arguments will be supplied to all why the collection of 1896 should not be allowed to drop below the large sum collected in 1895.

### THE PECUNIARY POSITION OF THE METROPOLITAN HOSPITALS.

The tables which are here incorporated show the statistics of hospital work in the metropolitan area during the year 1895, under the various heads of General Hospitals, Special Hospitals, Cottage Hospitals, Dispensaries, and Convalescent Homes. Of a great proportion of these institutions the same thing may be said—their income is not as large as their expenditure. In some, and these are the largest and best known, the disproportion is notable, regular, and increasing, while in others matters are not so dark in hue; but in all the life of the institution is carried on under a perpetual pecuniary stress. All the work of organisation and administration and all the work of ministering, alleviating, and healing, and all the work of teaching, are made wearisome by the dragging strain of poverty. Let us consider what this means. The labour that goes to the due organisation of a hospital is not light. When we see the same labour displayed in the management of a group of business houses or a few railway stations we give public praise to the men at the head of affairs and sometimes public honour. Yet in most of these cases the work is done in affluence and with the direct stimulus of greater wealth to be obtained in the future, while the work of the hospital official is done under the repression of a chill and apparently hopeless penury.

The stress of this poverty is more directly felt by the lay management of the hospitals, but the medical officers who are in many cases associated with the non-professional boards in the administrative work also fall beneath it—it not infrequently blights their efforts in behalf of their patients, while every medical school in London owns its cruel influence. Nor have we exhausted the disabilities under which hospital work is done beneath the eternal shadow of impending bankruptcy by pointing out how much the irksomeness is increased by the penury. Not only is the anxiety of the managers thereby enormously aggravated, but they are driven to expensive courses, which in their turn lead to still greater depletion of the exchequer. For what is more expensive than being poor and having a precarious source of income? It is universally allowed that uncertainty of income leads to irregular expenditure or rather that the expenditure of such incomes is apt to be regular enough in that it will be maintained steadily at the

rate warranted by the highest annual receipts: the irregularity is manifested in the proportion of the sums spent to the income in bad years. This is so well recognised that in certain classes of the community whose earnings are capricious a condition of general indebtedness to their fellow men is practically condoned which would be considered utterly discreditable to persons earning their livelihood in more methodical callings. It is also elementary knowledge that debt leads to debt and so prevents retrenchment. All schemes for economy that are intended to bear practical fruit pre-suppose in those who enter upon them more than an absolute freedom from debt; they include the possession from some source or other of a surplus wherewith to buy in the cheap market that is open to ready money and to carry out alterations—costly, perhaps, at first, but bound to be economical in the end. In such a scheme not only must all arrears be wiped out by payment or arrangement, but facilities for trading at a greater advantage in the future must be obtained.

The pecuniary position of our hospitals should be regarded in the same way. The counsel of perfection is that a sum of money should be obtained which would place all the institutions upon a sound working basis by freeing them from debt, and which should also be large enough to endow them to the extent which experience shows to be that by which their average annual income is disproportionate to their necessary annual expenditure. The Metropolitan Hospital Sunday Fund bears a certain relation to such a perfect and perfectly Utopian scheme. It is a source of regular income representing about a million of capital. It is a stop-gap, it is a makeshift, it is a jury-mast, but by its aid work goes on that would otherwise cease and the ship of medical charity is enabled to persevere on its storm-ridden course.

### THE PROGRESS OF THE METROPOLITAN HOSPITAL SUNDAY FUND.

The Metropolitan Hospital Sunday Fund has apparently settled down to contribute a certain sum annually to the expenses of the metropolitan hospitals—i.e., £40,000 inclusive of donations. The following figures show the progress of the Fund, and some of the reasons accounting for the fluctuations are appended, the donations being separated off from the totals:—

*Progress of the Hospital Sunday Fund.*

| Year. | Totals. | Donations. | Year. | Totals. | Donations. |
|---|---|---|---|---|---|
| 1873 | £27,700 | £1844 | 1885 | £34,320 | £2555 [2] |
| 1874 | 29,936 | 1505 | 1886 | 40,399 | 4817 [3] |
| 1875 | 26,396 | 1424 | 1887 | 40,607 | 4130 [4] |
| 1876 | 27,042 | 1339 | 1888 | 40,379 | 3080 |
| 1877 | 26,082 | 947 | 1889 | 41,744 | 3482 |
| 1878 | 24,904 | 1199 | 1890 | 42,814 | 3991 [5] |
| 1879 | 26,501 | 1120 | 1891 | 45,350 | 9019 [6] |
| 1880 | 30,423 | 1567 | 1892 | 41,512 | 4429 [7] |
| 1881 | 31,856 | 1638 | 1893 | 39,290 | 3682 [8] |
| 1882 | 34,146 | 2106 | 1894 | 43,679 | 7717 [9] |
| 1883 | 33,935 | 1960 | 1895 | 60,361 | 21,950 [10] |
| 1884 | 39,329 | 6410 [1] | | | |

[1] In 1884 £4500 was received from the managers of the International Health Exhibition.
[2] In 1885 a special donation of £1000 was received from James Wakley, Esq., M.D., Editor of THE LANCET.
[3] In 1886 a further special donation of £1000 was received from James Wakley, Esq., M.D.
[4] In 1887 a legacy of £1000 was paid by the executors of the late James Wakley, Esq., M.D.

## STATISTICS OF HOSPITAL WORK IN LONDON DURING THE YEAR 1895.

### TABLE I.—GENERAL HOSPITALS.*

*N.B.—The figures referring to out-patients in these Tables represent the number of* VISITS *paid by out-patients—*NOT *the* NUMBER *of out-patients.*

| Name of Hospital. | Hospital Sunday Fund award. | In-patients. | Relieved. | Cured. | Con-valescent homes. | Remaining under treatment. | Died. | Out-patients' visits. | Accidents and emergencies |
|---|---|---|---|---|---|---|---|---|---|
| | £ | | | | | | | | |
| Charing-cross | 1444 | 2,117 | 784 | 904 | 200 | 150 | 172 | 133,992 | 11,280 |
| French | 564 | 758 | 185 | 490 | 18 | 45 | 35 | 15,135 | 598 |
| German | 827 | 1,426 | 224 | 716 | 336 | 104 | 93 | 45,282 | 2,254 |
| Great Northern Central | 516 | 1,421 | 1,083 | | 97 | 103 | 143 | 60,461 | 8,537 |
| Guy's | 830 | 6,249 | 5,143 | | 621 | 408 | 572 | 78,762 | 37,648 |
| Hampstead | 151 | 270 | — | — | 3 | 20 | 8 | 1,015 | 155 |
| Italian | 110 | 237 | — | 232 | 4 | 9 | 5 | 13,424 | — |
| King's College | 2,200 | 2,717 | 947 | 1,058 | 191 | 190 | 237 | 54,550 | 13,906 |
| London | 5,156 | 9,955 | 3,156 | 5,104 | 816 | 604 | 1,691 | 302,258 | 21,000 |
| London Homœopathic | 192 | 565 | 109 | 234 | 75 | 69 | 32 | — | — |
| London Temperance | 963 | 1,066 | 213 | 709 | 47 | 74 | 99 | 17,161 | 8,826 |
| Metropolitan | 687 | 971 | 240 | 527 | 52 | 61 | 106 | 90,776 | 21,789 |
| Miller Hospital and Royal Kent Dispensary | 358 | — | — | — | — | — | — | — | — |
| North-West London | 522 | 683 | 140 | 400 | 29 | 40 | 57 | 45,707 | 8,000 |
| Poplar | 557 | 1007 | — | — | 46 | 50 | 59 | 27,231 | 945 |
| Royal Free | 1,237 | 1,802 | 1,532 | | 152 | 120 | 150 | 83,458 | 13,078 |
| St. George's | 2,063 | 4,191 | 2,372 | | 1,138 | 299 | 382 | 98,384 | 12,824 |
| SS. John and Elizabeth | 137 | 94 | 69 | — | 16 | 45 | 30 | — | — |
| St. Mary's | 2,750 | 3,968 | 886 | 2,473 | 295 | 250 | 344 | 52,699 | 16,805 |
| Seamen's Hospital Society | 1,265 | 2,375 | 591 | 1000 | — | 188 | 158 | 47,754 | 5,000 |
| The Middlesex | 2,956 | 3,280 | 2,639 | | 300 | 280 | 337 | 110,728 | 26,202 |
| Training Hospital, Tottenham | — | 529 | 53 | 345 | 5 | 24 | 77 | 11,825 | 3,104 |
| University College | 1,787 | 3,151 | 626 | 1,879 | 338 | 166 | 215 | 154,704 | 31,044 |
| West Ham | 372 | 441 | 44 | 290 | — | 53 | 66 | 82,912 | 8,296 |
| West London | 825 | 1,730 | 1,485 | | — | 82 | 163 | 75,507 | 6,761 |
| Westminster | 1,581 | 2,142 | 1,846 | | 266 | 158 | 138 | 60,000 | 7,006 |
| | £30,110 | 53,142 | 8,327 | 16,961 | 5,045 | 3,572 | 4,869 | 1,663,725 | 265,154 |
| Estimated to supply omissions | — | 437 | 7,182 | 11,905 | 60 | 22 | 31 | 76,090 | 7,747 |
| Total | £30,110 | 53,579 | 15,509 | 28,866 | 5,105 | 3,594 | 4,900 | 1,739,815 | 272,901 |

* We reproduce the term "General Hospitals" as employed by the Council of the Metropolitan Hospital Sunday Fund.

[5] Including legacy of £1003 14*s.* from the executors of the late Thomas Crouch, Esq.
[6] In 1891 donations of £5000 from the late Duke of Cleveland, &c., and £1000 from Sir Savile Crossley, Bart., were received.
[7] In 1892 Sir Savile Crossley, Bart., gave a further £1000; and a legacy of £105 was paid by the executors of the late Dr. H. E. Price of Brighton.
[8] In 1893 Sir Savile Crossley, Bart., gave a further donation of £1000.
[9] In 1894 a legacy of £5000 (less duty) was paid by the executors of the late W. J. Whitaker, Esq.; and Sir Savile Crossley, Bart., gave a further donation of £1000.
[10] In 1895 Messrs. Barnato and Friends gave a donation of £10,000; £3400 was received from the Stock Exchange through Messrs. Pym, Vaughan and Co., and Messrs. Burdett and Harris; Lord Iveagh gave a donation of £1000; Sir Savile Crossley, Bart., gave a further donation of £1000; and Mr. J. B. Robinson gave £1000.

From these figures it will be seen that twelve years ago the Fund made a sudden leap to the point which it was to maintain for the next decade. In 1884, owing to a magnificent donation of £4500 from the managers of the International Health Exhibition, the sum received was advanced from £33,935 in 1883 to £39,329. Falling somewhat the next year, it was righted again by donations and has since

remained at an average figure of a little over £40,000. In 1895 the fund took an enormous upward leap owing to the generosity of the Stock Exchange and of a group of financiers headed by Mr. Barnato. £13,000 was obtained from a few individuals, Mr. H. C. Burdett, whose personal exertions were responsible for this splendid result, being the channel through whom this munificence reached the fund. Consequently the total reached over £60,000, being £15,000 in excess of the previous highest collection. It will be this year the earnest endeavour of all to spare no pains to prevent back-sliding. The executive of the Fund cannot be blind to the factors that will be working against them in their attempts to keep the receipts at the now high level. If we glance back at the figures of eleven and twelve years ago we see that the point of £40,000 was reached practically in 1884, almost exactly the same sum being contributed as was contributed nine years later—viz., in 1893—but this inflation was succeeded by a little collapse, the receipts falling again to £34,320 in 1885. The increase of last year being due to individual benevolence, not to receipts from general offertories, cannot be counted upon, and it will behove all to work as if no such fortunate increment were again likely to occur. Secondly, there have been quite recently urgent appeals made on behalf of a few hospitals, and these appeals have been generously answered. Many persons having responded to the special calls will feel themselves quit of their liability towards medical charities for this year, so that the field from which the harvest is to be reaped will be found smaller if not less fertile. These are the chief two reasons why there must be no grave disappointment if the sum of £60,000 be not reached this year. Nor must there be any discouragement of future effort, and one more glance at the figures in illustration of the progress of the Fund will show why. When, twelve years ago, the Fund quite unexpectedly received a large augmentation a drop took place the next year from the high level reached; but this drop was merely the recoil precluding the forward spring, for in the following year—viz.,

TABLE II.—SPECIAL HOSPITALS.

| Name of Hospital. | Hospital Sunday Fund award. | In-patients. | Relieved. | Cured. | Convalescent homes. | Remaining under treatment. | Died. | Out-patients' visits. | Accidents and emergencies |
|---|---|---|---|---|---|---|---|---|---|
| | £ | | | | | | | | |
| City of London for Diseases of Chest | 1,402 | 918 | | 822 | 8 | 117 | 96 | 65,693 | — |
| Hospital for Consumption | 2,214 | 1,272 | | 1,108 | 191 | 187 | 197 | 72,646 | — |
| North London ,, | 495 | 434 | — | — | — | 60 | 29 | 19,590 | — |
| Royal Hospital for Diseases of Chest | 550 | 701 | | 631 | — | 65 | 57 | 23,844 | — |
| Roya' National Hosp. for Consumption | 413 | 778 | | 409 | — | 130 | 34 | — | — |
| Alexandra Hospital for Hip Disease | 247 | 159 | 16 | 50 | 27 | 66 | 9 | 1,442 | — |
| Children's Home Hospital (Barnet) | 55 | 143 | 24 | 96 | 20 | 13 | 7 | — | 26 |
| Belgrave Hospital for Children | 220 | 270 | — | — | — | 24 | 19 | 15,652 | — |
| Cheyne for Incurable ,, | 206 | 67 | 4 | 3 | 14 | 50 | 10 | — | — |
| East Lond. Hosp. for ,, | 688 | 1,238 | 332 | 484 | 111 | — | 239 | 66,310 | 19,596 |
| Evelina Hosp. for Sick ,, | 619 | 782 | | 559 | — | 60 | 163 | 28,264 | 520 |
| Home for Incurable ,, | 96 | 37 | — | — | — | 28 | 3 | — | — |
| Home for Sick ,, | 206 | 218 | 48 | 151 | 95 | 41 | 9 | 3,963 | — |
| Hospital for Sick ,, | 1,100 | 1,616 | 488 | 644 | 245 | 121 | 220 | 74,224 | — |
| North-East. Hosp. for ,, | 412 | — | — | — | — | — | — | — | — |
| Paddington-green for ,, | 206 | 298 | | 253 | 56 | 26 | 15 | 39,661a | 2,602 |
| Victoria Hospital for ,, | 825 | 1,132 | | 878 | — | 63 | 133 | 37,858 | — |
| "The Vine" | 41 | — | — | — | — | — | — | — | — |
| British Lying-in Hospital | 55 | — | — | — | — | — | — | — | — |
| City of London ,, | 110 | 490 | — | 489 | — | 21 | 1 | — | — |
| Clapham Maternity | 28 | 318 | 318 | — | — | — | — | 16,451 | — |
| East-end Mothers' Home | 85 | 230 | — | 227 | 1 | 10 | 4 | 2,590 | — |
| General Lying-in | 83 | — | — | — | — | — | — | — | — |
| Queen Charlotte's Lying-in | 495 | 1,124 | — | 1,118 | — | — | 6 | 9,590 | — |
| Chelsea Hospital for Women | 275 | 526 | 196 | 319 | 178 | 34 | 11 | 9,640 | — |
| Hospital for Women | 564 | — | — | — | — | — | — | — | — |
| Grosvenor Hosp. for Children and Women | 151 | 135 | — | — | — | 13 | 3 | 9,142 | — |
| New Hospital for Women | 275 | 534 | 162 | 287 | — | 39 | 2 | 26,446 | — |
| Royal Hosp. for Children and Women | 344 | — | — | — | — | — | — | — | — |
| Samaritan Free | 784 | 568 | 178 | 347 | 50 | 41 | 22 | 26,737 | — |
| Cancer | 962 | 805 | 715 | — | 10 | 80 | 82 | 11,534 | — |
| London Fever | 825 | 692 | — | 601 | — | 105 | 16 | — | — |
| Gordon for Fistula | 55 | 234 | 21 | 204 | — | 8 | 1 | 3,960 | — |
| St. Mark's ,, | 83 | — | — | — | — | — | — | — | — |
| National for Diseases of Heart &c. | 124 | 167 | 103 | 27 | — | 12 | 10 | 16,177 | — |
| Female Lock | 247 | 709 | 610 | — | — | 99 | 1 | — | — |
| Male ,, | — | — | — | — | — | — | — | — | — |
| Hospital for Epilepsy &c. | 82 | 90 | — | — | 5 | 29 | — | 9,988 | — |
| National for the Paralysed &c. | 1,169 | 804 | 396 | 169 | 148 | 158 | 51 | 32,119 | — |
| West-End for Nervous System | 110 | 217 | 178 | 32 | — | 40 | 7 | 30,140 | — |
| Central London Ophthalmic | 50 | 170 | — | — | — | — | — | 24,939 | — |
| Royal Eye | 206 | — | — | — | — | — | — | — | — |
| Royal London Ophthalmic | 770 | 2,184 | — | 2,000 | 10 | 57 | 3 | 131,450 | 2,000 |
| Royal Westminster ,, | 137 | 468 | | 461 | — | 14 | — | 30,030 | — |
| Western ,, | 45 | 220 | 30 | 190 | 10 | — | — | 20,141 | 2,202 |
| City Orthopædic | 110 | 190 | 29 | 128 | — | 32 | 1 | 10,000 | — |
| National ,, | 66 | 206 | | 150 | — | 56 | — | 2,668 | — |
| Royal ,, | 110 | 184 | 42 | 70 | 2 | 50 | — | 7,000 | — |
| Royal Sea Bathing Infirmary | 550 | 510 | 262 | 127 | — | 102 | 6 | — | — |
| Hospital for Diseases of Skin | 28 | 35 | 21 | 10 | — | 4 | — | 13,027 | — |
| Western Skin | — | — | — | — | — | — | — | 5,540 | — |
| St. Peter's for Stone | 69 | 448 | | 438 | — | 14 | 10 | 30,792 | — |
| Central London Throat and Ear | 76 | 257 | 35 | 200 | 6 | 10 | 6 | 38,735 | — |
| Hospital for Diseases of Throat | 41 | — | — | — | — | — | — | — | — |
| Royal Ear | 8 | 217 | 57 | 160 | 10 | 318 | 1 | 8,714 | — |
| Phillip's Memorial Homœopathic | 48 | — | — | — | — | — | — | — | — |
| The Dental | 165 | — | — | — | — | — | — | 59,819 | — |
| National Dental | 117 | — | — | — | — | — | — | 34,669 | — |
| Estimated to supply omissions | £19,494 — | 22,795 4,983 | 4,265 5,564 | 8,124 7,679 | 1,197 841 | 2,388 388 | 1,484 217 | 1,671,205 302,531 | 29,946 5 190 |
| Total | £19,494 | 27,778 | 9,829 | 15,803 | 2,038 | 2,776 | 1,701 | 1,373,736 | 32,136 |

886—the sum of £40,000 was for the first time reached, at which figure the receipts have since been maintained.

Year by year the admirable and eloquent appeals of the London clergy of all denominations are directed to the raising of this money. Year after year their appeals make clear to their congregations that in their opinion the claim of the hospitals upon the public is imperative and one to which no professingly religious person can close his or her ears. And they speak from knowledge. The figures we place before our readers to-day constitute in themselves knowledge, but most of our metropolitan clergy have a deeper, closer intimacy with the working of the medical charities of London than can be gained by the study of a wilderness of figures. They not only prepare themselves to urge the claim of the Fund by obtaining every information even to the smallest details with regard to the general and medical work of the hospitals, but, ungrudging of the draft upon their already over-occupied time, they personally visit the institutions in their neighbourhood and see for themselves the work that is done in them. The advocates of the Metropolitan Hospital Sunday Fund from the London pulpits are fitted in every way for their task. They know how good the cause is for which they speak. But in spite of all this year after year—in spite of the excellence of the case to be pleaded and the sympathetic skill of the pleaders—the sum subscribed remains approximately the same. It is true that last year a sudden spurt was taken and that the fund rose by nearly one half, viz., to upwards of £60,000. It should not be allowed to go down again, but, having regard to the source of the sudden influx of funds, we are bound to admit that we can hardly anticipate that the larger sum will be reached—we can only hope. For years certain congregations have made up between them a certain sum, and we cannot pretend to see any reason why they should this year elect to contribute more. They may, nay, we hope will, and we propose to furnish them in this Supplement with two main reasons why they should.

The first of these reasons is the absolute necessity of the various medical charities of the metropolis for a regular income. The second is the fact that the Fund performs many of the functions of a central board for the management of the hospitals of London, and that the formation of such a board is very generally considered to be the first step towards the solution of the immense financial problems that vex the souls of the managers of the hospitals. There are many other reasons which will appear to most people, and not unnaturally, more cogent. The cause of the sick is one that will seem to demand more stirring language, and the arguments founded on humanity and blessed charity will suggest themselves as a more suitable way of appealing for support to the Fund than our more practical if less sentimental request that subscriptions should be given to enable the management of the hospitals to do their good work in a more business-like manner. Need we say that we are fully aware of the claims of the suffering poor; that neither the bitterness of their sorrows nor the sanctity of all endeavour to alleviate them escapes us? But we credit our readers with similar knowledge and similar sentiments. We simply design to furnish information to prove that the support of the Metropolitan Hospital Sunday Fund which would be dictated by loving-kindness is also most clearly indicated by common sense and common thrift.

### THE VOLUNTARY SYSTEM.

It will be seen that the two reasons which we have just given why the claims of the Metropolitan Hospital Sunday Fund should receive the deliberate as well as the generous attention of the public can only be advanced if we presuppose that the existent system of support by voluntary contributions is the right one. It is the system of which we are all exceedingly proud. The spontaneity of the large annual gifts and bequests to our hospitals stands out pre-eminent in a not unselfish age as a grand testimony to the right-thinking generosity of the people at large, as a proof not to be gainsaid that the sympathy of the rich with the poor and of the whole with the sick is not merely of the lip, but proceeds from the heart also. Yet it would be wrong to bolster up such a system, however morally splendid, if it were found to be unworkable in a practical world.

Most of the hospitals are practically at their wit's end for money. Now it may be asserted: If so, the voluntary system must have broken down. The endowed charities must have lost or misspent their endowments, and they, together with the unendowed which have ceased to justify their existence in the eyes of the charitable, must come upon the rates. We do not think so. This is not the place to discuss the problems of State-supported hospitals and the need for a hospital board and no attempt will be made to do so. But a few words more may be said to show that in the opinion of those who know the voluntary system is the best, and that in many directions the Metropolitan Hospital Sunday Fund exactly fills the gaps which even those proudest of it feel to exist in that system.

In the year 1890 the House of Lords appointed a Special Committee to investigate the whole subject of hospital accommodation in the metropolis, and that Committee, after deliberation which extended over two years, during which it received the assistance of a large number of highly competent witnesses versed in the various branches of the subject, produced a report. Although dealing with a great number of topics this report was mainly directed towards proving how greatly the work of the hospitals would be expedited, how enormously it would be advanced, by improved organisation, by a knitting together, in fact, of all the institutions into one coöperative whole. In accordance with this view the Committee made a recommendation that a Central Hospital Board should be formed and should be empowered to receive and publish hospital accounts, to advise upon new schemes, and to act generally as the authorised representatives of the public in the way of observing and appreciating and criticising hospital management and work. This proposal, notwithstanding the high authority by which it was recommended, has at present borne no fruit. Yet there is, in fact, no other thing possible if we still continue to employ the voluntary system. State aid, which is looked upon by many who would willingly take another view as the only remedy that the future leaves us to expect, would be fraught with many grave evils. It is the boast of our country that her hospitals are supported by voluntary contributions and are consequently free from the meshes of officialism. No man can obtain appointments at our hospitals in return for services rendered other than medical; the influence of politics is unfelt in our treatment of pneumonia; and red-tape is not a ligature that is employed in our wards. Yet inasmuch as many of our hospitals are on the verge of bankruptcy, their efficiency being seriously impaired by their poverty, the voluntary system must be held to have to some extent broken down. The demands of the sick have increased and the sources of revenue have decreased. The irregularity with which the impulse to give must necessarily act deprives the voluntary tribute of half its value. The voluntary principal is an admirable one, but it is jealous of system and prefers to act locally, impulsively, and irregularly. If certain much-needed qualities could be introduced into voluntary hospitals, if they could be brought to regard each other as coöperating for charitable ends, not merely competing with each other for public subscriptions, if they could be brought to realise certain common principles of administration, a new era of prosperity might be assured to them. In almost these identical words we have recently summed up certain phases in the career of the metropolitan hospitals, and said that for these ills one panacea has been proposed—the creation of a Central Hospital Board.

### THE FUND AS AN ORGANISING BODY.

Now it is precisely as an economising agency that the Fund has achieved its greatest success. At present there is but little prospect of the creation of any such central board, but the Council of the Metropolitan Hospital Sunday Fund has been in a position to accomplish much by way of suggestion and criticism to advance the interests of coöperation among the various charities. Nor is this all. The Council, has exercised a gentle but by no means ineffective supervision over hospital expenditure, and by comparison and scrutiny enforces the doctrine that every pound of revenue must be represented by its equivalent in the form of service or of necessaries supplied to the objects of the charity. In this way it accomplishes what no private benefactor could do were he never so assiduous to the ungracious task of criticism. The Council speaks with the authority of numbers and is comparatively free from the suspicion of partiality in its strictures. In this way it effects what has never before been attempted, and in a very considerable measure it succeeds in a task in which success, though of vast importance, is singularly difficult of attainment. Its contributions thus have a double value. They aid in the support of the assisted institutions and they contribute very materially to the economy of the whole revenues from whatever source derived.

### A FARTHING RATE.

There remains now but one thing for us to do—to implore the benevolent public to remember that as the size of the metropolis increases, so the Fund should grow, if the contributions are to be taken to represent a voluntary rate, to meet the wants of our sick poor.

The recent census of London has shown that in the period between 1891 and 1896 the metropolis increased in population to the extent of 221,000 souls. This is a number equal to the entire population of a very large provincial town. To assist the appreciation of the figures, we have prepared diagrams showing by proportionate areas the proportionate magnitudes of Newcastle-upon-Tyne and New London, by which last expression we intend to signify the addition which has been made to the population of the County Council's London within the past five years.

FIG. 1. FIG. 2.

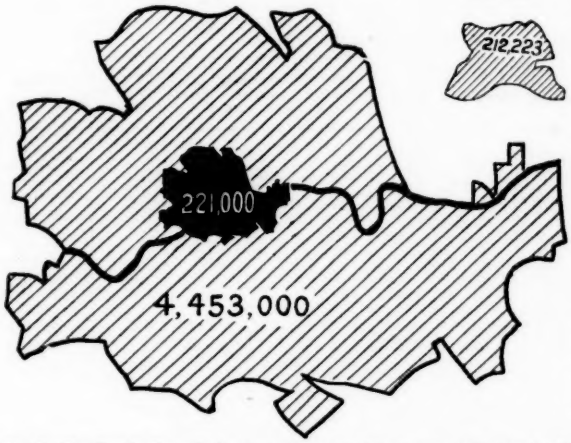


FIG. 1.—The County Council's London: the dark patch represents "New London."
FIG. 2.—Newcastle-on-Tyne.

This great development has not been accompanied by any corresponding growth in our greatest charity—the Metropolitan Hospital Sunday Fund. In point of fact, the annual collection shows no growth at all. From time to time the amount placed at the disposal of the Council of the Fund receives a welcome augmentation from the bounty of some private individual, but the sum collected in the churches was actually less in 1893 than in 1884, and had it not been for private munificence the Fund would have been sadly crippled last year. It is worth while to make the attempt to realise what the significance of this may be.

And first let us take the collection at its best and apportion it over the population of the metropolis. In 1890 the amount collected by offertory was nearly £39,000 and the population nearly 4,200,000, so that the average contribution of every individual would amount to something *less than one farthing*. For the purpose of this estimate it is assumed that only the County Council's London is interested in the hospitals of the metropolis. But that is very far from the fact. Outside the official boundary lies a densely populated zone inhabited by Londoners, although nominally appertaining to the adjacent rural districts, and to this area are extended in no small measure the benefits of the metropolital hospital system. Were the population of Greater London taken into account for the purposes of our present estimate the modest farthing would shrink considerably. Let it, however, suffice to assume, without refining upon the figures, that Londoners are prepared to support this great charitable work to the extent of an annual subscription of one farthing a head.

This is by no means an unfair way of estimating the result, for although it is quite true that a charge of whatever kind distributed evenly over the entire population in proportion to the number of heads would bear very unduly upon the poor, yet if, on the other hand, the benefits conferred by hospitals are considered, it will, of course, be found that these are in a preponderating measure realised by the most numerous and least wealthy classes of the community The families, including children, of the poor are no less dependent than the families of the rich upon medical attendance, and to a very large extent in the case of poor people this necessity is supplied by hospitals. An estimate of population, therefore, affords the best means of realising how the benefits of the hospital service are distributed, for no class is excluded from these benefits; and when it is realised that the return made in the form of the Metropolitan Hospital Sunday Fund works out at something less than one farthing a head it will, we think, be freely admitted that there is good reason for regarding it, not only as inadequate to the needs of the hospitals, but also as unworthy of the community which contributes it.

### THE SMALL CONTRIBUTOR.

This is a view of the facts which should commend itself especially to persons of moderate or restricted means. To such the Metropolitan Hospital Sunday Fund affords a peculiarly fit opportunity of tendering support to the medical charities of London. A small subscription given in this way possesses both actually and sentimentally a value that it could not otherwise have. It is no small thing that the widow contributing her mite upon this occasion should be able to feel that it becomes part and parcel of a Fund large enough to form an indispensable part of the charitable revenues of this great city and yet drawn almost entirely from sources such as her own benevolence has opened up. Thousands of persons in London are so situated. The subscription list with its regulation guinea is not for them, and were it not for the recurrence of the Fund collections they would stand quite aloof, wishing well to their suffering neighbours, but being powerless to promote their well-being in any way.

It is from this class that the revenues of the Metropolitan Hospital Sunday Fund are chiefly drawn. Large contributions are the exception and rightly so. For although the Fund has claims upon the rich it has especial claims upon the poor, and the comparatively poor are so much the most numerous class that they preponderate by reason of their numbers, and must continue so to do as long as the Fund continues to command the general confidence and support of the people at large. It would, indeed, be a sad day when the struggling many withdrew from the support of this charity and left it to be carried on by the opulent few. The resources of the opulent are much more restricted than those of their poorer neighbours, and it is upon the sympathy of the many that any great undertaking must be built which, like that advocated to-day, requires ample and continuous pecuniary support. The days of "princely" munificence are past, the new word has not yet been coined, but the new order has appeared, and in due time we shall recognise by a suitable word that *the munificence of the masses* has in these later times replaced that of princes and has become the mainstay of all spontaneous movements upon a large scale.

### THE GROWTH OF THE FUND AND THE GROWTH OF THE CITY.

The Hospital Sunday Fund, therefore, must as the first condition of success commend itself to the conscience and approval of the great public, and its success in the past affords strong evidence that it has not failed in this respect. But this is precisely the point at which it becomes difficult to understand why during the past few years there has been no regular increase in the annual collection. The growth above depicted imports growth of the need supplied, growth of the contributing community, and growth of the available resources. The enormous fact brought to our sight by these diagrams needs no insisting upon. In five years a town as large as Newcastle-on-Tyne has been added to London. In compensation for the additional responsibility that this increase of population has laid upon our hospitals proportionate subscriptions should have been added, and should continue to be added to the Fund. The £60,000 that was reached last year by a bound should now be easily forthcoming as a regular subsidy. But we cannot count upon this. We can hope for it and work for it, and even expect it, because of the justice of the expectation, but it may not arrive. The total subscriptions may recede again to £40,000, and lest it should so happen, let us consider the circumstances to which may be attributable the deficient interest in the objects of the charity.

One reason, and only one, affords a possible explanation.

The churches we know have not wearied in any measure of this good work, but that the public may to some extent lose sight of it is credible. The very fact that the collection comes round with the regularity of an anniversary makes it easy for it to slip into a matter of routine, and as such to lose more or less of the human interest in which it takes its rise. If we are right in this surmise then the remedy for the shortcoming which we have at present to deplore must be sought in bringing home with force the forgotten facts concerning the medical needs of London.

This is a task which devolves mainly upon the clergy of various denominations, and they will certainly not be wanting in its performance. Whether it may be possible for them to increase the urgency of their appeals is a question upon which we do not presume to offer an opinion. If it be so, then we doubt not that they will fill the position, feeling with us that the object is worthy of their best and greatest efforts. The great public needs to be aroused both to an apprehension of the facts and also to a sense of responsibility were relieved, 57,796 were cured, and 6730 died. But, as we have implied, the sense of personal interest is a less worthy, and in this case we are convinced that it is a less influential, motive than the sense of sympathy with the sufferers, for whom our hospitals afford the only available refuge. That tale of 103,249 in-patients speaks of untold suffering and absolutely invaluable relief; the 6730 deaths mean what no words can express in the way of softening the death-bed sorrows of the poor. But what these figures do not in any way pourtray is the suffering borne without the aid of skilled attendance and the elaborate appliances which the hospitals afford. Great as is the work actually done it leaves much unaccomplished and even unattempted by reason of the starved condition of the institutions. This is the voiceless grief, which more than any words, appeals to those who know the facts. This, if it could be painted in such wise as to be understanded of the people, would evoke a response such as has never yet been made to the advocacy of the Metropolitan Hospital

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

| Name of Hospital. | Hospital Sunday Fund award. | In-patients. | Relieved. | Cured. | Convalescent homes. | Remaining under treatment. | Died. | Out patients' visits. | Accidents and emergencies |
|---|---|---|---|---|---|---|---|---|---|
| | £ | | | | | | | | |
| Metropolitan Convalescent | 894 | 3,358 | 1,297 | 2,023 | — | 38 | — | — | — |
| Bexhill ,, | 412 | 1,622 | 451 | 1,137 | — | 34 | 2 | — | — |
| All Saints ,, | 757 | 3,545 | 1,923 | 1,441 | — | 116 | 5 | — | — |
| Mrs. Gladstone's ,, | 138 | 705 | — | — | — | 13 | — | — | — |
| Hahnemann ,, | 55 | 132 | 52 | 80 | 8 | 26 | — | 3,452 | — |
| Hanwell ,, | 27 | — | — | — | — | — | — | — | — |
| Herbert ,, | 41 | 403 | 226 | 141 | — | 25 | 2 | — | — |
| Herne Bay (Baldwin-Brown) Convalescent | 34 | 334 | — | — | — | — | — | — | — |
| Homœopathic Convalescent | 14 | 184 | — | — | — | — | — | — | — |
| King's College ,, | 120 | 510 | 88 | 399 | — | 21 | 1 | — | — |
| Mrs. Kitto's ,, | 124 | 290 | — | — | — | — | — | — | — |
| London and Brighton Female Convalescent | 76 | 2,307 | — | — | — | — | 1 | — | — |
| Mary Wardell Convalescent | 139 | 247 | — | — | — | — | — | — | — |
| Morley House ,, | 289 | 794 | 793 | — | — | 67 | — | — | — |
| Princess Frederica's Convalescent | 21 | 148 | — | — | — | — | — | — | — |
| St. Andrew's (Clewer) Convalescent | 234 | 611 | 567 | — | — | 65 | 9 | — | — |
| Do. (Folkestone) ,, | 344 | 1,932 | — | — | — | 59 | — | — | — |
| St. John's Home for Convalescent Children. | 82 | 256 | — | — | — | — | — | — | — |
| St. Joseph's Convalescent Home | 67 | 449 | 325 | 120 | — | 54 | 4 | — | — |
| Convalescent Home for Poor Children, St. Leonards-on-Sea | 179 | 788 | — | — | — | 39 | 1 | — | — |
| St. Michael's Convalescent | 55 | 157 | — | — | — | — | — | — | — |
| Seaside ,, | 206 | — | — | — | — | — | — | — | — |
| Beckenham Cottage Hospital | 69 | 118 | 9 | 91 | — | 11 | 7 | — | — |
| Blackheath and Charlton Cottage Hospital | 98 | 163 | 38 | 96 | 2 | 12 | 13 | 3,177 | 35 |
| Bromley, Kent ,, | 103 | 218 | 49 | 132 | 5 | 17 | 3 | — | — |
| Chislehurst, Sidcup, &c. ,, | 55 | 133 | 17 | 87 | 4 | 10 | 4 | — | — |
| Eltham ,, | 41 | 80 | 12 | 54 | 4 | 7 | 3 | — | 12 |
| Enfield ,, | 55 | 92 | 4 | 73 | 6 | 5 | 7 | — | 10 |
| Epsom and Ewell ,, | 96 | 111 | 13 | 89 | 21 | 6 | 9 | — | 11 |
| Hounslow ,, | 48 | 80 | 22 | 40 | — | 11 | 8 | — | 30 |
| Reigate and Redhill ,, | 66 | 215 | 27 | 137 | 10 | 20 | 6 | — | 41 |
| Sidcup ,, | 41 | 94 | 20 | 62 | 5 | 5 | 2 | 210 | 18 |
| Warley ,, | 11 | 37 | — | 37 | — | 4 | — | — | — |
| Wimbledon ,, | 55 | 117 | 14 | 88 | — | 10 | 1 | 100 | 18 |
| Woolwich and Plumstead ,, | 41 | 72 | 19 | 40 | 2 | 3 | 8 | — | — |
| Establishment for Gentlewomen | 151 | 147 | 2 | 78 | — | 12 | 3 | — | — |
| National Sanatorium for Consumption | 83 | 239 | 103 | — | — | — | 3 | — | — |
| Invalid Asylum | 76 | 191 | — | — | — | 24 | 2 | — | — |
| Firs Home | 55 | 45 | 15 | — | — | 14 | 16 | — | — |
| St. Catherine's Home | 48 | 32 | 29 | 12 | 1 | 12 | 3 | — | — |
| | £5,500 | 20,980 | 5,853 | 6,458 | 78 | 740 | 123 | 6,939 | 175 |
| Estimated to supply omissions | — | 904 | 2,998 | 6,669 | — | 38 | 6 | 3,726 | — |
| Total | £5,500 | 21,894 | 8,551 | 13,127 | 78 | 778 | 129 | 10,665 | 175 |

for the support of the medical charities of London upon an adequate scale, and we venture, therefore, to submit a few considerations bearing on these points.

### THINGS THAT THE PUBLIC SHOULD READ, MARK, AND LEARN.

The great public comprises a very wide range of classes and conditions of men, but none on whom the many-sided charity which comes to-day to the fore has not pressing claims. Of that largest class of all, distinguished neither by poverty nor riches, we have already spoken. To them the hospital is not simply a form of charity, but in a real and even an emphatic sense a resource, since in many emergencies they must and do resort to it for the relief of their own necessities. From this point of view the record of work done in the London hospitals during the past year constitutes an eloquent appeal. We take the following illustrative figures from the returns furnished to us by the hospitals:—In-patients treated 103,249, of whom 33,889 Sunday Fund. But if the materials for such an appeal are lacking experience is not wanting from which they could be supplied. Among the working classes there are but few persons of adult age who cannot tell of instances of cruel suffering patiently, and often heroically, borne in poverty and distressing circumstances which might have been greatly relieved if hospital accommodation had been available for its treatment. Such instances give point, and even poignancy, to the reflection that great as is the good work done by the hospitals of the metropolis it is unequal to the vastly greater requirements of growing London. And yet the Metropolitan Hospital Sunday Fund, as represented by offertories, does not grow.

### THE IMPARTIAL WORK OF THE FUND.

No class of the community is beyond the reach of some claim on the part of the Metropolitan Hospital Sunday Fund. If the poor by special knowledge of the wants to which it administers have special reason to value

its ministrations, the well-to-do, upon the other hand, are under a peculiar obligation to contribute to its support. It must never be forgotten that rich as well as poor appear as patients in the hospital wards. In this respect no distinction is drawn between one class and another when it is a question of accident or unforeseen emergency. The club man struck down by a cab in Piccadilly is equally welcome with the labourer crushed by a crane at the London Docks, and to the one no less than to the other the prompt aid which the hospitals afford is at such a conjuncture a question of life or death. Nor should it be forgotten in this connexion that to rich and poor alike the benefit accrues of the great schools of medicine which find in the hospitals of the metropolis the unsurpassed instruments of clinical instruction. It is, therefore, not upon a *different footing* that the appeal is rested which is to-day made to the wealthier classes, as well as to the preponderating number of the poorer classes. The difference is rather a difference of knowledge and experience. To the poor the problem is familiar, its urgency and its extent are well known and easily understood, whereas the resources which are available for dealing with it are much less perfectly apprehended. The rich may have some difficulty in appreciating with what crushing weight the burden of sickness bears upon people of narrow means, but at least they know that a contribution of £40.000 a year is a mere bagatelle when drawn from the length and breadth of London, and that it does not in any sense represent what the churches of the metropolis would accomplish under a genuine impulse of the enthusiasm of humanity.

TABLE IV.—DISPENSARIES.

| Name of Dispensary. | Hospital Sunday Fund award. | Out-patients' visits. |
|---|---|---|
| Battersea Provident | £96 | 39,033 |
| Bloomsbury ,, | 16 | — |
| Brixton, &c. | 83 | 26,524 |
| Brompton Provident | 37 | 7,885 |
| Camberwell ,, | 137 | 100,149 |
| Camden | 19 | — |
| Chelsea, Brompton, and Belgrave Provident | 65 | 4 715 |
| Chelsea Provident | 18 | — |
| City | 120 | — |
| City of London and East London | 28 | 47,079 |
| Clapham General and Provident | 48 | 10,967 |
| Deptford Medical Mission | 20 | 15,958 |
| Eastern | 52 | 6,395 |
| East Dulwich Provident | 27 | 3,863 |
| Farringdon General | 62 | — |
| Finsbury | 76 | 40,035 |
| Forest Hill | 52 | 6,362 |
| Gipsy Hill and Upper Norwood | — | — |
| Hackney Provident | 10 | — |
| Hampstead ,, | 60 | — |
| Holloway and North Islington | 89 | 27,822 |
| Islington | 62 | 50,003 |
| Kensal-town Provident | 12 | 7,216 |
| Kensington | 96 | 9,930 |
| Kilburn, Maida-vale, and St. John's-wood | 59 | 3,678 |
| Kilburn Provident Medical Institution | 40 | 19,517 |
| London | 25 | — |
| London Medical Mission | 96 | 8,450 |
| Margaret-street Infirmary for Consumption | — | — |
| Metropolitan | 55 | 39,042 |
| Notting-hill | 30 | 1,227 |
| Paddington Provident | 55 | 6,876 |
| Pimlico ,, | 25 | 17,753 |
| Portland-town | 27 | — |
| Portobello-road Provident | 10 | — |
| Public | 69 | 14,823 |
| Queen Adelaide's | 55 | 22,810 |
| Royal General | 55 | 14,717 |
| Royal Pimlico Provident | 62 | — |
| Royal South London | 82 | 12,217 |
| St. George's and St. James's | 72 | — |
| St. George's (Hanover-square) | 59 | 9,240 |
| St. John's-wood and Portland-town | 40 | 20,000 |
| St. Marylebone General | 64 | 28,608 |
| St. Pancras and Northern | 64 | 19,200 |
| South Lambeth, Stockwell, & North Brixton | 62 | 12,909 |
| Stamford-hill, Stoke Newington, &c. | 76 | 35,670 |
| Tower Hamlets | 59 | 17,256 |
| Walworth Provident | 16 | 4,335 |
| Wandsworth-common Provident | 12 | — |
| Westbourne Provident | 21 | 9,215 |
| Western | 83 | 22,864 |
| Western General | 186 | — |
| Westminster General | 43 | — |
| Whitechapel Provident | 83 | 19,989 |
| | £2,916 | 764,320 |
| Estimated to supply omissions | — | 509,971 |
| Total | £2,916 | 1,274,291 |

The rich and poor alike the benefit accrues of the great schools of medicine which find in the hospitals of the metropolis the unsurpassed instruments of clinical instruction. It is, therefore, not upon a *different footing* that the appeal is rested which is to-day made to the wealthier classes, as well as to the preponderating number of the poorer classes. The difference is rather a difference of knowledge and experience. To the poor the problem is familiar, its urgency and its extent are well known and easily understood, whereas the resources which are available for dealing with it are much less perfectly apprehended. The rich may have some difficulty in appreciating with what crushing weight the burden of sickness bears upon people of narrow means, but at least they know that a contribution of £40.000 a year is a mere bagatelle when drawn from the length and breadth of London, and that it does not in any sense represent what the churches of the metropolis would accomplish under a genuine impulse of the enthusiasm of humanity.

It may indeed be said that wealthy Londoners are accustomed to contribute largely to the sustentation funds of the various hospitals, and that their contributions to this particular fund amount only to a small part of their whole benefactions flowing in these channels. And this is perfectly true. By financial and personal help, as by service upon committees and the like, the laymen of London take a noble part in hospital work. And we should be sorry indeed to say a word in disparagement of that personal interest in the well-being of some particular institution which is happily so widely diffused throughout English society. But this notwithstanding, the Metropolitan Hospital Sunday Fund has very special claims to the consideration even of those whose interests are most deeply involved in behalf of this, that, or the other institution. None more than these persons feel the painful sense of inability to respond to all the deserving claims that come before them, and none more than they yearn for larger means of help or the power by a sound economy to make such means as they command go farther and effect more good. The Metropolitan Hospital Sunday Fund exactly meets such a want.

### GIVE, GIVE, GIVE.

And that is our appeal on behalf of the Metropolitan Hospital Sunday Fund for this year.

The rich should give out of their bounty, and not only because they are rich, but because they are directly benefited by the hospitals.

The poor should give out of their poverty, and they need no reminding what the hospital means to them when they are sick.

To the benevolent-minded no scheme can commend itself as more worthy of their aid than a fund to benefit their suffering and poorer brethren.

In the eyes of the practical and inquiring, no less than in those of the benevolent, the Fund must find favour, for it represents order in the distribution of charity, while it strengthens the voluntary system of hospital support, of which we are all properly proud.

To all orders of mind, to all social grades, and to all creed alike the Metropolitan Hospital Sunday Fund must appear as a noble charity, splendidly directed, economically managed, justly administered, practical, and humane. Therefore, to all but one word remains to say—Give, GIVE, GIVE.

## SUMMARY OF TABLES.

| — | Hospital Sunday Fund award. | In-patients. | Relieved. | Cured. | Convalescent homes. | Remaining under treatment. | Died. | Out-patients' visits. | Accidents and emergencies |
|---|---|---|---|---|---|---|---|---|---|
| General Hospitals | £30,110 | 53,579 | 15,509 | 28,866 | 5,105 | 3,594 | 4,900 | 1,739,815 | 272,901 |
| Special Hospitals | 19,494 | 27,778 | 9,829 | 15,803 | 2,038 | 2,776 | 1,701 | 1,373,736 | 32,136 |
| Cottage Hospitals and Convalescent Homes | 5,500 | 21,892 | 8,551 | 13,127 | 78 | 778 | 129 | 10,665 | 175 |
| Dispensaries | 2,916 | — | — | — | — | — | — | 1,274,291 | — |
| Total | £58,020 | 103,249 | 33,889 | 57,796 | 7,221 | 7,148 | 6,730 | 4,398,507 | 305,212 |

# A SYNOPSIS

SHOWING APPROXIMATELY THE NUMBER OF INDIVIDUALS (270 IN ALL) ENGAGED IN THE WORK OF

# A GENERAL HOSPITAL

OF ABOUT 500 BEDS.

## Medical Staff.

### HOSPITAL.

| | |
|---|---|
| Consulting Staff | 4 |
| Physicians and Surgeons | 8 |
| Assistant Physicians, Assistant Surgeons | 8 |
| Medical Officers to Special Departments | 5 |
| Anæsthetists | 2 |
| Medical and Surgical Registrars | 2 |
| Casualty Officers, Medical and Surgical | 2 |
| Resident Medical Officer | 1 |
| House Physicians and House Surgeons | 8 |
| Clinical Clerks, Dressers | 40 |
| Dispensary Department | 6 |

### CONVALESCENT HOME.

| | |
|---|---|
| Resident and Visiting Staff | 3 |
| Dispenser | 1 |
| | **90** |

## Governing Body.

| | |
|---|---|
| President | 1 |
| Vice-Presidents | 9 |
| Treasurers | 2 |
| Board of Management | 24 |

## Administrative Staff.

| | |
|---|---|
| Secretary | 1 |
| Office Clerks | 3 |
| Collector | 1 |
| House Steward | 1 |
| Kitchen Department | 5 |
| Laundry Department | 6 |
| Domestic Servants | 6 |
| House Porters | 6 |
| Hall Porter | 1 |

## Religious Staff.

| | |
|---|---|
| The Chaplain | 1 |
| Visiting Ministers | 3 |
| | **70** |

## Nursing Staff.

### HOSPITAL.

| | |
|---|---|
| Matron | 1 |
| Night Superintendent | 1 |
| Ward Sisters | 10 |
| Staff Nurses | 40 |
| Probationer Nurses | 40 |
| Ward Maids | 12 |

### CONVALESCENT HOME.

| | |
|---|---|
| Matron | |
| Nursing Staff | 2 |
| Domestic Servants | 3 |
| | **110** |

**TOTAL ... ... 270**

## THE METROPOLITAN HOSPITAL SUNDAY FUND.

*Amounts received and disbursed in the year 1895.*

**Dr.** RECEIPTS *for the year ending 31st October, 1895.*

| 1895. | £ s. d. | £ s. d. |
|---|---|---|
| To Balance at Bank of England, 1st Nov., 1894 | 2,384 19 10 | |
| ,, Balance in hands of Secretary | 12 2 0 | |
| | | 2,397 1 10 |
| ,, Collections made at Sundry Places of Worship | 38,338 15 8 | |
| ,, Collections at Schools | 31 15 11 | |
| ,, Donations, including £14 14*s.* 0*d.* for Surgical Appliances | 7,636 10 | |
| ,, Donations, Messrs. B. I. Barnato and others | 10,000 0 | |
| ,, Donations, Members of the Stock Exchange | 3,400 0 0 | |
| ,, Legacy: the late Crosby Lockwood, Esq. | 50 0 0 | |
| ,, Dividend on £45,346 1*s.* 3*d.* Gueadon Bequest 2½ Consols (1 year) | 904 1 9 | |
| | | 60,361 4 2 |
| | | £62,758 6 0 |

**Cr.** PAYMENTS *for the year ending 31st October, 1895.*

| 1895. | £ s. d. | £ s. d. |
|---|---|---|
| By Awards to 116 Hospitals | 54,666 18 0 | |
| ,, Awards to 5 Institutions | 412 10 0 | |
| ,, Awards to 53 Dispensaries | 2,917 10 6 | |
| ,, Surgical Appliances | 1,908 3 4 | |
| | | 59,905 1 10 |
| ,, Rent | 170 0 0 | |
| ,, Fuel, Gas, and Office Cleaning | 23 2 2 | |
| ,, Furniture | 1 15 0 | |
| ,, Printing and Stationery | 253 19 8 | |
| ,, Stamps and Postage | 85 6 10 | |
| ,, Advertisements | 274 4 6 | |
| ,, Salaries and Wages | 801 2 9 | |
| ,, Auditors' Fee (Messrs. Hart Bros., 1894) | 10 10 0 | |
| ,, Sundries | 4 10 11 | |
| | | 1,624 11 10 |
| ,, Balance at Bank of England | 1,216 10 11 | |
| ,, Balance in hands of Secretary | 12 1 5 | |
| | | 1,228 12 4 |
| | | £62,758 6 0 |

Audited and found correct, this 22nd day of November, 1895.

(Signed) W. H. PANNELL & Co., *Chartered Accountants*, Basinghall-street, E.C.

*** In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Metropolitan Hospital Sunday Fund Committee) we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. To them we desire, as on many previous occasions, to tender our sincere thanks.—ED. L.